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SECRET INFORMATION BULLETIN NO. 20

# BATTLE EXPERIENCE

## SUPPORTING OPERATIONS FOR THE CAPTURE OF THE MARIANAS ISLANDS (SAIPAN GUAM AND TINIAN)

## JUNE - AUGUST 1944

(THIRD MAJOR STEPPING STONE WESTWARD)

*CAUTION*

THIS BULLETIN AND THE INFORMATION CONTAINED HEREIN MUST NOT FALL INTO THE HANDS OF THE ENEMY

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UNITED STATES FLEET

HEADQUARTERS OF THE COMMANDER IN CHIEF

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FOR VICTORY
BUY
UNITED STATES
WAR
BONDS
AND
STAMPS

UNITED STATES FLEET
HEADQUARTERS OF THE COMMANDER IN CHIEF
NAVY DEPARTMENT
WASHINGTON 25, D. C.

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21 December 1944

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These bulletins on "Battle Experience" are issued for the general information of officers.

They are planned to promulgate reliable information concerning actual war experience. Any adverse comment made, is not intended to reflect criticism on any individual but to assist officers in appreciating the best line of action in many circumstances.

It is inevitable that there would be considerable delay if complete analysis were made before issue to the Fleet. Comments that are made in these bulletins represent those expressions of opinion from responsible sources that were available at the time the particular operation under discussion was completed.

Studies are continuing to the end that divergent views may be reconciled and complete analysis made.

Encounters with the enemy discussed in these bulletins, are generally presented in their chronological order. It will be apparent that "lessons learned" during the earlier part of the war were put to good advantage in subsequent engagements.

Air combat actions, antisubmarine experiences, submarine patrol experiences, amphibious operations and technical gunnery experiences are not specifically covered in this bulletin.

Material contained in these bulletins was drawn largely from war diaries, and battle reports of various commanders and ships.

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C M Cooke Jr.

C. M. COOKE, Jr.,
Chief of Staff.



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# SUPPORTING OPERATIONS FOR THE CAPTURE OF THE MARIANAS ISLANDS (SAIPAN, GUAM AND TINIAN) JUNE - AUGUST 1944

## PREFACE

The MARIANAS ISLANDS OPERATION, as carried out, was divided into three phases: PHASE I, Capture of SAIPAN; PHASE II, Capture of GUAM; and PHASE III, Capture of TINIAN. The landings for these phases were made as follows:

(Zone minus TEN Time)

SAIPAN - Dog Day, 15 June 1944.
GUAM - W Day, (D plus 37) 21 July 1944.
TINIAN - J Day, (D plus 40) 24 July 1944.

All landings were preceded by intensive air and naval bombardments, minesweeping, and reconnaissance of landing beaches and alternate landing beaches by the Underwater Demolition Teams.

This campaign was brilliantly conceived, splendidly planned, and precisely executed. The efficiency and teamwork with which the operation was conducted are a great credit to all who participated.

The desire of the Commander in Chief, U. S. Pacific Fleet, to do battle with the Japanese Fleet almost materialized during the Marianas Islands Operation. Two Groups of Japanese strong units were reported, one on D minus 2 day and both on the night of D day, by our submarines on reconnaissance, steaming eastward from the Philippine Islands. On the evening of 18 June (D plus 3), the Japanese First Mobile Fleet had been located by D.F. as roughly 355 miles west-southwest of Task Force 58. The surface ships of Task Force 58 were unable to close the enemy ships due to various factors brought out later in this bulletin.

## MISSION

The broad mission of the Fifth Fleet was the support of the assault on, capture, defense and development of the MARIANAS ISLANDS. The specific mission of Task Force 58 was first gaining control of the air in the theater of operations, then support of the assault and defense of the general area until such time as our forces were secure ashore and able to provide their own defense.

## OWN FORCES

Our forces were under the command of Admiral R. A. Spruance, Commander Fifth Fleet. They comprised the Assault and Garrison Forces (TF 56) Task Forces 51, 52 and 53 under the command of Vice Admiral R. K. Turner (Commander Joint Expeditionary Force), CTF 51. The following table gives a summary, by types, of vessels attached to Task Force 51 (later separated into TF 52, Northern Attack Force, and TF 53, Southern Attack Force) during this operation. The list does not include garrison force shipping of second and succeeding echelons, nor units from other forces which operated temporarily under the Senior Officers Present Afloat, SAIPAN and GUAM.

**Summary of Vessels of Joint Expeditionary Force**

(Both Northern and Southern Attack Forces)

| | | | |
|---|---|---|---|
| 2 AGC | 1 APH | 10 DMS | 1 AKN |
| 7 OBB | 13 AKA | 10 AM | 4 AN |
| 11 CVE | 17 AP | 16 SC | 1 ARB |
| 6 CA | 10 AK | 24 YMS | 2 ARL |
| 5 CL | 9 XAP | 10 PC | 2 ARS |
| 86 DD | 12 XAK | 10 PC(S) | 91 LST |
| 16 DE | 13 APD | 6 AT | 50 LCI |
| 43 APA | 8 LSD | 2 AVD | 1 APc |
| | | | 36 LCT |

Total - 535

Next there was the Fast Carrier Task Force, Task Force 58, under command of Vice Admiral Mitscher. The organization of TF 58 was changed on 17-18 June by CTF 58 with approval of Commander Fifth Fleet. This reorganization consisted mainly of forming TG 58.7, under Vice Admiral Lee, with BBs, some cruisers and destroyers.

Other Task Forces involved were Task Force 57 under Vice Admiral Hoover, Commander Forward Area; Task Force 59 under Major General Hale, Land-Based Aircraft; Task Force 16 under Vice Admiral Calhoun, Service Force; Task Force 17 under Vice Admiral Lockwood, Submarine Force; and Task Group 50.17 under Captain Pare, Fueling Group. In addition, Commander South Pacific Force and Commander Southwest Pacific Force cooperated in air searches and air strikes against bases which might otherwise have interfered with the operation.

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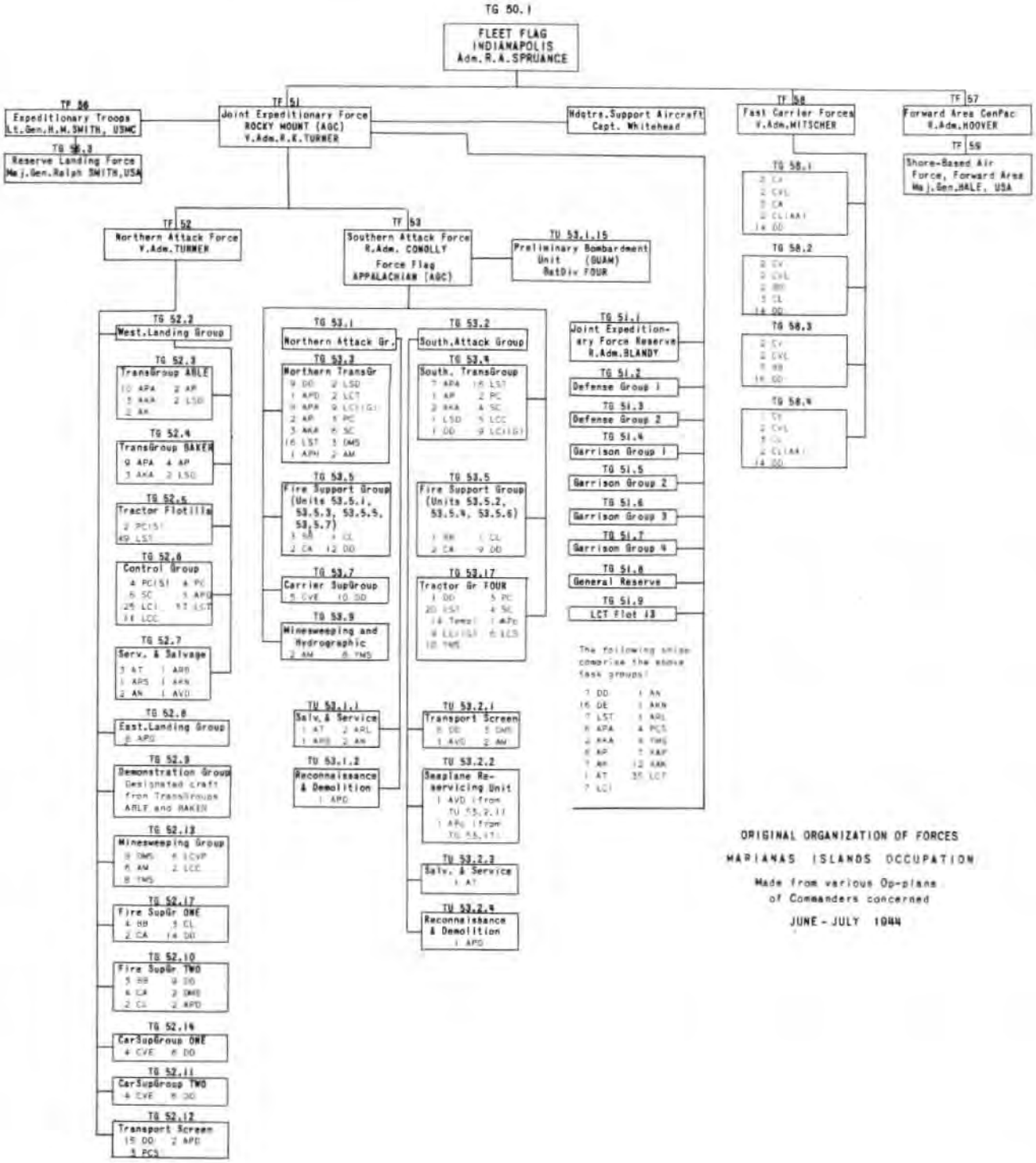


ORIGINAL ORGANIZATION OF FORCES

MARIANAS ISLANDS OCCUPATION

Made from various Op-plans
of Commanders concerned

JUNE - JULY 1944

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## ENEMY FORCES

*COMBATANT SHIPS:* The enemy combatant surface force that presented a threat to the assault operations was reported to include some or all of the following types:

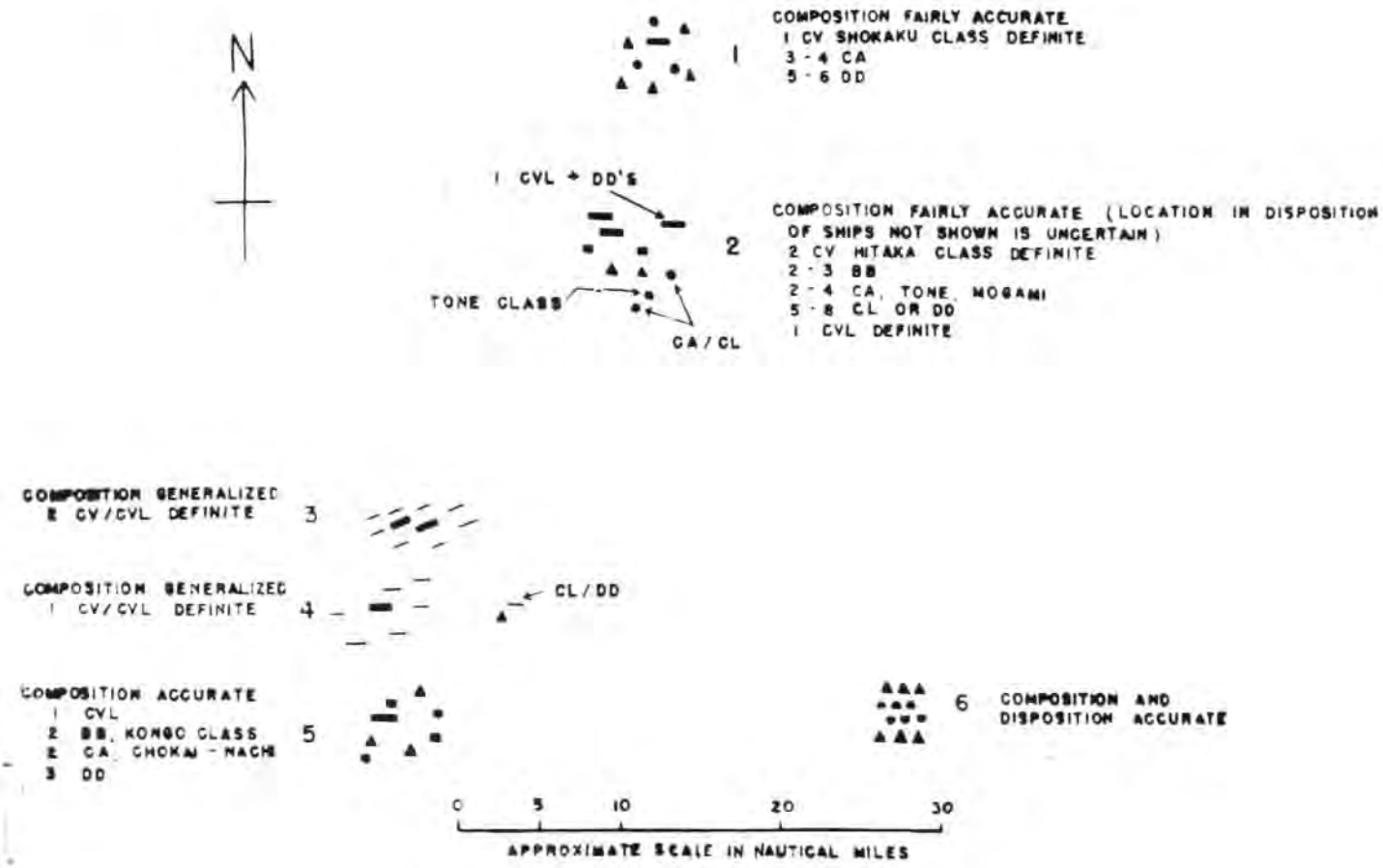
8 Carriers
4 - 5 Battleships
7 - 10 Heavy Cruisers
5 - 8 Light Cruisers or Destroyers
14 - 18 Destroyers

In addition to the combatant surface units above, six fleet oilers were reported with the Japanese fleet.

*Commander Task Force 58 reports as follows:*

The following diagram shows what is believed to be the approximate composition and disposition of the Japanese fleet, which was divided into two forces, one composed of two and the other of three task groups with a separate oiler group astern. It is realized that the disposition and composition as shown on the diagram is different from that shown on sketches submitted by units of this force in their action reports, but all the information now known was not available to the units concerned when those reports were prepared.

* * *




COMPOSITION AND DISPOSITION OF JAPANESE FLEET
20 JUNE 1944 (E.L.D.)

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*AIRCRAFT:* It is not possible to state definitely the strength of the enemy's Air Force during this operation, due to carrier planes entering the area and land-based planes in and near the area entering and escaping, but a fair estimate may be had by referring to Commander Task Force 58's report of estimated damage inflicted on enemy aircraft by his force from 6 June to 7 August 1944 as:

875 airborne aircraft destroyed
276 aircraft destroyed on the ground

1151 Total enemy aircraft destroyed by TF 58

Additional planes shot down by TFs 57 and 59 cannot be listed as the reports from these Forces have not been received. Also, CTF 51 does not list planes shot down.

*GROUND STRENGTH:* The supporting ships played an important role in reducing enemy ground strength prior to landing, during landing, and on call fire subsequent to landing, supporting our ground forces during their advances.

The enemy ground strength was considerably in excess of what was expected, sizeable reenforcements having arrived in the MARIANAS just prior to our attack. A very good estimate may be obtained from the following:

*Commander Task Force 51 reports:*

**PRISONERS OF WAR***

| | | |
|---|---|---|
| SAIPAN | (15 June - 10 Aug. (incl) | 1810 |
| GUAM | (21 July - 12 Aug. (incl) | 86 |
| TINIAN | (24 July - 10 Aug. (incl) | 404 |
| | TOTAL | 2300 |

**CIVILIAN INTERNEES***

| | | |
|---|---|---|
| SAIPAN | (15 June - 10 Aug. (incl) | 14735 |
| GUAM | (21 July - 10 Aug. (incl) | 14869 |
| TINIAN | (24 July - 10 Aug. (incl) | 13262 |
| | TOTAL | 42866 |

**ENEMY DEAD BURIED***

*PERIOD OF ASSAULT*

| | | |
|---|---|---|
| SAIPAN | (15 June - 9 July) | 13542 |
| GUAM | (21 July - 10 Aug.) | 11502 |
| TINIAN | (24 July - 1 Aug.) | 2683 |
| | TOTAL | 27727 |

*FROM DAY OF ASSAULT TO 15 AUGUST*

| | |
|---|---|
| SAIPAN | 25144 |
| GUAM | 14067 |
| TINIAN | 5745 |
| TOTAL | 44956 |

* Figures are approximate and were taken from Task Force 53, Task Force 56, Task Group 56.1, Task Group 56.2 and Division Reports.

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ENEMY FORCES *(Cont.)*

Later despatch from CTF 57, dated 19 October 1944, gives following totals of killed Japanese:

SAIPAN - 25,941
GUAM - 16,679
TINIAN - 6,850

Total - 49,470

OWN DAMAGE

*Commander Fifth Fleet reports:*

1. There had been frequent attacks on our forces in the vicinity of SAIPAN and the area to the eastward by small groups of enemy aircraft resulting in the following damage:

| | |
|---|---|
| LST 84 | - Hit by bomb 17 June. Structural damage. |
| LCI 468 | - Torpedoed 17 June. Severe damage. |
| SARANAC | - Hit by bomb 18 June. Main steam line ruptured. Speed limited to 10 knots. Some structural damage. |
| NESHANIC | - Hit by bomb 18 June. Minor structural damage. |
| SAUGATUK | - Hit by bomb 18 June. Minor structural damage. |
| FANSHAW BAY | - 100 pound bomb hit 19 June. After elevator disabled. Fire main ruptured. Minor hull leaks. Extensive electrical cable damage. Arresting gear inoperative. |
| MARYLAND | - Torpedoed 22 June. Hull damage forward, limiting speed to 10 knots. |

2. During the bombardment and assault of SAIPAN and TINIAN damage was received as follows:

| | |
|---|---|
| CALIFORNIA | - Hit by mortar shell 14 June. Main battery director and forward radar inoperative. |
| BRAINE | - Hit by 6" shell 14 June. Number 2 torpedo mount inoperative and after fireroom out of commission. |
| TENNESSEE | - Hit by four 6" shells 15 June. Number 7 five inch mount disabled. Minor structural damage. |
| PHELPS | - Hit by two 8" shells 17 June. Number 3 boiler and blower out of commission. |
| COLORADO | - Received 22 hits of about six inch caliber from a previously unobserved battery of three or more coastal defense guns located behind TINIAN Town 24 July. Damage received, while widespread, did not prevent COLORADO from continuing counter-battery fire during the day. Was sent to SAIPAN before dark for inspection of damage. |

*Commander Cruiser Division Four comments:*

It is worthy to note here that the COLORADO was hit by concealed shore batteries emplaced in cave-like slits in the stone ridge just south of TINIAN town. Although other ships, including this Flagship, had steamed through this same water for many days prior to this incident, the Japanese did not reveal this hideout. The fact that they fired these 6" guns at this time is contributed to the presence of the demonstration group transports in the area. Undoubtedly the enemy expected, even as late as How Hour, that the landing would be on the beaches off TINIAN town. This forced their hand compelling them to reveal the gun positions.

| | |
|---|---|
| NORMAN SCOTT | - Received 7 hits on 24 July from same battery as fired on COLORADO; this battery was silenced shortly thereafter by counter-battery fire. Extensive structural damage above waterline, one 5" mount, one 40 MM mount and one torpedo tube mount were seriously damaged by direct hits. Ship proceeded to SAIPAN for inspection of battle damage and temporary repairs. |

3. Damage received by ships of Task Force 58 during the air engagement with the enemy fleet:

| | |
|---|---|
| SOUTH DAKOTA | - Hit by bomb 19 June. Extensive structural and electrical damage not affecting military efficiency. |
| INDIANA | - Plane crash against side 19 June. Minor structural damage. |
| BUNKER HILL | - Near bomb miss 19 June. Superficial damage. |
| WASP | - Near bomb miss 19 June. Superficial damage. |
| MINNEAPOLIS | - Near bomb miss 19 June. Minor hull and superstructure damage. |
| HUDSON | - Hit by 5" shell 19 June. Damage not reported. |

DAMAGE TO ENEMY SHIPPING

The reports of Commanders Task Forces 51, 52 and 53 do not include Damage to Enemy Shipping.

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Commander Task Force 58 reports for his Task Force as follows:

In the following estimate of enemy ships sunk or destroyed, probably sunk or destroyed, and damaged, AK's, AO's, and AE's are listed as large when over 7,000 gross tons, medium when between 4,000 and 7,000 gross tons, and small when between 300 and 4,000 gross tons. Vessels under 300 gross tons are listed as coasters, sampans, luggers and trawlers. In preparing the estimate, every effort was made to eliminate duplications in reports from different units:

| Ship Type | Sunk or Destroyed | Probably Sunk or Destroyed | Damaged |
|---|---|---|---|
| CV | 1 | 1 (See Note 2) | 1 |
| CVL | | 1 (See Note 2) | 1 |
| BB | | | 1 |
| CA | | | 2 |
| CL | | | 2 |
| DD | 5 (See Note 1) | | 7 |
| DE | 5 | 2 | 4 |
| Small Escort Vessel (PC) | 2 | 4 | 6 |
| DM | 1 | 1 | 1 |
| Landing Ships | 2 | 2 | 1 |
| Large AO | 2 | | 3 |
| Small AO | 3 | | 2 |
| Large AK | 1 | | |
| Medium AK | 11 | 3 | 5 |
| Small AK | 20 | 20 | 27 |
| Medium AE | 1 | | |
| Coasters | 5 | | 5 |
| Trawlers | 1 | 2 | 2 |
| Sampans | 21 | 9 | 27 |
| Luggers | 4 | 14 | 19 |

In addition to the above, numerous barges, landing and other small craft were destroyed or damaged. Several of the barges were about 50 tons, and some were found in ocean-going convoys; others were fuel barges. Landing craft destroyed by strafing included a fair number filled with personnel.

*NOTE 1:* This figure includes one new type ship which appeared to be the flagship of the convoy attacked off the BONINS on 4 August. From a study of photographs obtained, the ship appears more like a very large anti-submarine escort ship than a destroyer. She was larger than the other escorts in this convoy, which were reported as ODD or DE but at least one of which appears from a study of photographs to be similar to the ship seen in VD 4 5G SAIPAN Sortie of 29 May.

*NOTE 2:* The CV and CVL are assessed as possibly sunk.

Commander Fifth Fleet reports on the air action against the enemy fleet commencing at 1840 K, 20 June 1944, by Task Force 58 as follows:

Information as to the results of the strike received from Commander Task Force 58 to date 13 July 1944, indicate the damage to the enemy as a result of this strike to be as follows:

1 CV - HITAKA class, sunk.
1 CV - HITAKA class, badly damaged, burning fiercely, probably sunk.
1 CV - SHOKAKU class, received three or four 1000 pound bomb hits.
1 CVL - Received at least one hit.

1 BB - KONGO class, hit.
1 CA - Hit.

1 DD - Believed sunk.
2 DD - Damaged.

3 AO - Sunk.
2 AO - Burning.

15 or 20 planes shot down.

## PLANS

*The Commander Fifth Fleet comments:*

1. The plans for this operation contemplated the following:

(a) An initial attack by carrier-based air forces on SAIPAN, TINIAN, ROTA, GUAM and PAGAN for the purpose of destroying enemy aircraft and air facilities in these positions.

(b) Strikes by land-based aircraft of the Forward Area, Central Pacific, and of the Southwest Pacific Area on TRUK, WOLEAI, PALAU and YAP to neutralize or reduce the scope of enemy air operations from these positions.

(c) Carrier strikes to destroy enemy aircraft at IWO JIMA and shipping at CHICHI JIMA as early as possible.

(d) Long-range air search to cover the advance of our forces toward the MARIANAS and to detect the movement of enemy naval forces from the southern PHILIPPINES.

(e) Reconnaissance by our submarines at enemy bases and observation and attack at strategic positions in the PHILIPPINES and western Pacific.

(f) The seizure of SAIPAN after two days of preliminary bombardment.

(g) The seizure of GUAM as early as possible after the seizure of SAIPAN.

(h) The seizure of TINIAN employing the same troops used in the seizure of SAIPAN, at such time as this could be undertaken.

(i) The employment of the air groups, fast battleships, cruisers and destroyers of the Fast Carrier Task Forces, Pacific, to prevent interference with the assault of the MARIANAS objectives, augmented as required by cruisers and destroyers of the Joint Expeditionary Force.

(j) The employment of all combatant types of the Fast Carrier Task Forces, Pacific, and the Joint Expeditionary Force to oppose the full strength of the enemy fleet, if such should become necessary.

2. Until D-day, 15 June, the plans of Commander FIFTH Fleet as set forth in his operation plan and those of his subordinates were carried out with one major exception. On D minus 4 day, the Fast Carrier Task Forces, Pacific, made a long-range fighter sweep of GUAM, ROTA, TINIAN and SAIPAN instead of delaying their initial attack until daylight on D minus 3 day. This change in plan was made because of the large estimated strength of enemy aircraft in the MARIANAS, the opportunity for surprise and the desirability of altering the pattern of attack used in previous carrier attacks on shore air objectives.

3. On D minus 2 day, 13 June, our submarines on reconnaissance in the vicinity of TAWI TAWI reported the departure from there into the SULU Sea of an enemy force composed of battleships, carriers, cruisers and destroyers. Other information indicated a movement of battleships from the HALMAHERA area into the waters east of the PHILIPPINES about the same time. These movements, following promptly after our first attacks on the MARIANAS, led naturally to speculation as to the enemy's intentions. The movements were not at that time of a sufficiently definitive nature to cause any major change in our plans or dispositions.

*Commander Bombardment Group TWO comments in part:*

The activities of the task group fall naturally into two phases: the first being the pre-assault bombardment and demolition operations, and the second the naval gunfire in support of troops. The postponement of the assault on GUAM and the return of the GUAM assault forces to ENIWETOK necessitated a revision of the original plan. The revised plan as carried out deals entirely with Phase I of the operation since the requirements for Phase II are fully covered in the original plan. However, the task organization for Phase I was derived directly from the Attack Orders of Commander Task Force FIFTY-THREE and Commander Task Group 53.2 so that no change in task unit objectives would be necessary in passing from one phase to the other.

It was apparent that the demolition activities would need gunfire cover and support at various times which could not be foretold. Therefore, the support gunfire was arranged on the basis of "Roger Hour" which could be ordered by signal at any time and as many times as was found necessary or desirable. "Roger Hour" was defined as the time the demolition teams left their parent vessels. The Task Group Commander considers that the *successful accomplishment* of the demolitions with surprisingly small losses *can be* chiefly *attributed to* the volume and accuracy of the supporting fire furnished under this flexible plan.

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PLANS *(Cont.)*

*Commander Task Force 51 (also CTF 52) comments:*

The following essential features were incorporated in basic plans:

(a) Major air strikes by aircraft of fast Carrier Task Forces (TF 58) commencing on D-3. (Actually the first strike, a fighter sweep, was made on D-4). These strikes were to gain complete control of the air and to soften the islands for the landings.

(b) An extensive bombardment on Dog minus TWO by Battleships of Task Force 58. This bombardment was designed to knock out major enemy defenses and to support initial minesweeping activities in accordance with requirements specified by CTF 52.

(c) Harassing fire throughout the night of Dog minus TWO by Destroyers of TF 58, as outlined by CTF 52.

(d) Bombardment by ships of TF 52 and TF 53 on Dog minus ONE, to soften defenses and provide close support of Underwater Demolition Teams and minesweeping operations.

(e) Harassing fire throughout the night of Dog minus ONE by vessels of TF 52.

(f) Intensive preparation fire commencing at dawn of Dog Day.

(g) Large carrier strikes at How minus SIXTY plus a special VF strafing attack on the landing beaches when the LVTs were within 500 yards of shore.

(h) Intensive close support of landing.

(i) Call fires, scheduled fires and illumination after landing until the final capture of the island.

The essential features as listed were incorporated in detail in Annex to CTF 52 Attack Order to which reference is hereby made. All features were planned to cover either the preferred or the alternate landing plan.

OPERATING AREAS AND TASK OF BOMBARDMENT UNITS

*Commander Western Bombardment Unit (SAIPAN) (CTU 58.7.3) comments:*

The waters to the West of SAIPAN and TINIAN ISLANDS were divided into three operating areas. The NORTHERN BOMBARDMENT UNIT (BatDiv 9 plus screening destroyers) was assigned the area North of a line bearing 330° T. from MUCHO POINT. The WESTERN BOMBARDMENT UNIT (BatDiv 8 plus screening destroyers) was assigned area between the above line and a line bearing 290° T. from AGINGAN POINT. The SOUTHERN BOMBARDMENT UNIT (BatDiv 7 plus screening destroyers) was assigned area to the Southward of the line from AGINGAN POINT.

Our tasks were to protect the minesweepers by destroying guns and position which might jeopardize the minesweeping operations, and to destroy enemy guns and installations which could be used in opposition to subsequent bombardments and to later assault by amphibious forces.

In laying down the track, notice was taken of the following: (1) range of probable enemy guns as obtained from latest intelligence, (2) the existence of possible mine fields in toward the shore and (3) the necessity of avoiding interference with the NORTHERN BOMBARDMENT UNIT, SOUTHERN BOMBARDMENT UNIT and particularly the minesweepers.

TRAINING NAVAL GUNFIRE SUPPORT

*Commander Task Force 53 comments:*

*General* - Training for the Fire Support Group assigned to Task Force 53 (less CruDiv-6 plus CruDiv-12 and MONTPELIER) was completed in the SOLOMON ISLANDS Area. CruDiv-6 remained in the MARSHALLS during the period available for training, and was unable to participate in any training or in the rehearsals with other units of the Task Force. Special emphasis was placed upon realistic training. Target maps, target areas, fire support areas, lines of fire, troop units supported, and other features were made as nearly identical with those to be set up for GUAM as could possibly be provided in the locations available. Fire support ships were, insofar as practicable, assigned to the same fire support units, fire support areas and assault battalions for the rehearsals as were to be assigned later in the actual assault on GUAM.

*Ship Training* - All fire support ships were impressed with the fact that they must be prepared to move in to extremely close ranges to destroy enemy gun positions. In training, therefore, fire support ships operated close to the beaches, and carried out fire missions approximating those actually received later at GUAM.

*Training of Shore Fire Control Parties* - The Third Marine Division and First Marine Provisional Brigade were assigned to JASCO and JASU, respectively. Since the naval gunfire liaison officers

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**TRAINING NAVAL GUNFIRE SUPPORT** *(Cont.)*

attached to the JASCO and JASU were known to be inexperienced, arrangements were made for the assignment to Task Force 53 of 20 experienced naval gunfire liaison officers from the Third Amphibious Force. These twenty naval officers were assigned to the various assault battalions as naval gunfire liaison officers and because of their greater experience took over the duties of the shore fire control party naval gunfire liaison officers. The officers from the JASCO and JASU, thus supplemented, remained in the various shore fire control parties as supernumeraries and as understudies. In effect therefore, most shore fire control parties actually had two naval gunfire liaison officers. The wisdom of this arrangement was demonstrated in the later gratifying performance of the shore fire control parties.

Most fire support ships conducted communication drills with assigned shore fire control parties before any actual firing. Arrangements were made for the officers of these parties to visit ships assigned to Fire Support Units. This afforded an opportunity for familiarization with shipboard procedures.

It was realized early in the training period that the seizure of GUAM would require a very large number of call fires. Accordingly, special emphasis was placed upon this phase of training.

**WEATHER**

*Commander Task Group 58.2 comments:*

Weather encountered during the period from 6 to 30 July was typical of the summer season for this area. In general, trade wind weather prevailed in the MARIANAS region and,while flying conditions were made undesirable for short periods because of increased squall activity, average or better conditions existed for the greater portion of each day. Winds averaged ESE 12 knots and no velocities above 30 knots were experienced.

*Commander Task Force 52 (Tinian) comments:*

1. The big unknown factor in making plans for the capture of TINIAN was the weather. Careful check was kept on this by CincPac's Weather Central and by local aerologists. Commander Task Force 51 directed patrol planes searching to the westward to take special weather observations with a view of detecting indications of disturbances, and particularly to detect any large swells which might be moving from the southwestward. A reasonable assurance of three days good weather was considered essential before the initiation of assault operations.

2. Plans were prepared to cover the contingency of bad weather after the landing. They included the preparation of approximately thirty tons of varied supplies for delivery by parachute drop, and also the employment of aircraft then available at SAIPAN for delivery of approximately one hundred tons daily after USHI Point Airfield had been captured and prepared for use.

3. The operation proceeded according to plan, even including the bad weather, which fortunately did not arrive until 28 July (JIG plus FOUR).

**CHRONOLOGY OF EVENTS AFFECTING SUPPORTING FORCES**

**SAIPAN**

*Commander Task Force 51 comments in part:*

1. The scheduled pre-assault operations commenced on 1 June with a photo coverage mission on SAIPAN and GUAM. The results of this photo reconnaissance were delivered to the Commanders of Attack Groups ONE and TWO on 8 June. The bombing from Southwest Pacific bases commenced on 3 June with a bombing strike on PALAU to harass shipping and air installations. Neutralization air strikes were launched 9 June against airfields of PALAU, WOLEAI and YAP. Air interdiction was continued at TRUK, PULUWAT, and SATAWAN. Carrier strikes against SAIPAN, TINIAN, GUAM, ROTA and PAGAN were launched by the Fast Carrier Task Force on 11 June, and succeeding days. The principal targets of this strike were aircraft and associated facilities, then ships, the anti-aircraft batteries and the coast defense weapons, to burn cane fields, and furnish late photo coverage of SAIPAN and TINIAN.

2. On 13 June, DOG minus Two Day, the fast battleships and destroyers of TF 58 bombarded SAIPAN and TINIAN. Their objective was to destroy aircraft, to render airfields temporarily useless, to destroy coastal defense and AA batteries, and to burn all unburned cane fields lying south of MUTCHO POINT - CHACHA VILLAGE. The Bombardment Group covered Minesweeping Units ONE and TWO while they swept the shelf to the Westward of SAIPAN. The destroyers of this force maintained harassing fire on SAIPAN and TINIAN during the night of 13 - 14 June. Air operations were continued against the airfields of SAIPAN, TINIAN, GUAM, ROTA and PAGAN. (See photograph p. 10). The first air strike resulted in the destruction of 124 enemy planes in the air and on the ground. It also resulted in the sinking of 13 ships, 10 in the harbor at SAIPAN and 3 outside. Anti-aircraft fire was light.

3. June 14 a call Patrol of VFs, VSBs and VTBs was maintained over the objective to protect the bombardment and sweeping operations. At dawn,

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TINIAN

Bombardment Groups ONE and TWO commenced bombardment and interdiction fires on SAIPAN and TINIAN, respectively. These fires were continued throughout the day. Their primary targets were coastal defense guns, AA batteries, mobile artillery weapons, enemy defenses and personnel, with particular attention given the defenses near the landing beaches. During this bombardment the BRAINE was hit by a 4.7 inch shell while bombarding TINIAN. The ship was not seriously damaged. The CALIFORNIA was hit by one projectile from a minor caliber shore battery. Close supporting fire was furnished the beach reconnaissance made by the Underwater Demolition Teams and the final sweeping of the shelf. No mines were found. The beach reconnaissance gained invaluable information on the landing beaches and their defenses. Much credit must be given these teams as the mission was carried out under very hazardous conditions and in the face of heavy enemy fire. Four men from these teams were killed and five seriously wounded. No obstacles or reef mines were discovered. A considerable number of bunkers were found and 12 sixty-foot boats were found anchored off shore as strong points. The teams made sketches of the reefs and beaches, and copies were delivered to the Landing Force on their arrival. Late photographic negatives in large numbers, particularly of beaches, were delivered by plane drop to the Force flagship, and prints delivered by despatch vessels to troops. During the night of 14 - 15 June destroyers continued harassing fire on SAIPAN and TINIAN. The high-speed Minesweepers were stationed to prevent movement between SAIPAN and TINIAN, and away from the islands to north and south.

4. June 15. Units of the Northern Attack Force arrived on DOG Day as scheduled. At 0552 CTF 51 ordered "Land the Landing Force." Heavy air strikes and naval gunfire preceded the landing and were continuous throughout the day. The TENNESSEE was hit by two projectiles from a 4.7 inch battery from TINIAN. HOW Hour, initially set for 0830, was delayed to 0840 due to distance from transport areas to the beaches. Landings were made on beaches in the vicinity of CHARAN-KANOA against light initial resistance. Preparation and support fires by surface and air were excellent. Troops met considerable resistance in CHARAN-KANOA and from AGINGAN POINT. By 1000 units were half way to the 0-1 line and by 1800 the 0-1 line was generally reached. AGINGAN POINT was captured, but fighting was continuing in CHARAN-KANOA. Approximately 20,000 assault troops were ashore. Resistance from organized defenses, counter-attacks, and from artillery, mortar, and machine gun fire was stubborn. Considerable 8-inch fire was received from TINIAN. Naval gunfire continued throughout most of the night. TF 51 less several transports, LSTs, control craft, and gunfire support vessels retired to the west at 1830. Several enemy planes attacked the Force at 1846 but no damage was sustained. In the afternoon a moderate swell arose and prevented unloading at night after several LVTs had overturned.

5. June 16. Retirement Groups returned at dawn. Enemy mortar fire on the beaches interfered with unloading, but did not stop it. The GILMER and the SHAW destroyed 5 small AKs north of SAIPAN who had not gotten the news of our presence. The MELVIN and WADLEIGH attacked an enemy submarine and claimed a possible sinking. Other contacts were reported but failed to develop. Night retirement was again ordered but several transports and LSTs remained for unloading as well as combatant ships for night firing. Swell conditions were rather bad, and greatly retarded the landings. Continued reports of the advance of the enemy fleet led to the execution of the Major Battle Plan.

6. June 17. Our morning attack supported by air, surface, and artillery bombardment was made against heavy resistance but pushed steadily ahead. The 27th InfDiv was committed on the right flank and at 1500 RCT 165 reached ASLITO AIRFIELD. The beaches were nearly free from mortar fire, but poor beaches and surf conditions retarded unloading. Occasional fire was received from TINIAN. At 1510 a TBF made a crash landing within our lines on CHARAN-KANOA AIRSTRIP. The plane was destroyed but the crew saved. Five PBMs arrived this date and night sector searches were made to detect the enemy fleet. (Note: This number gradually increased until five squadrons were present, based on 6 tenders, and using the TANAPAG seaplane base for overhauls and checks.) At 1800 several enemy planes attacked. At 1950 Carrier Support Group TWO was attacked by an unreported number of bombers. The FANSHAW BAY sustained one bomb hit and proceeded to ENIWETOK. Several enemy planes were destroyed and others damaged. The PHELPS was hit by two 8-inch shells from the vicinity of GARAPAN. Damage was not severe and she remained in action. The Retirement Groups proceeded eastward in accordance with the Major Battle Plan.

7. June 18. At 1000 our attack, preceded by artillery, naval gunfire and air support, advanced rapidly. The 27th InfDiv secured ASLITO FIELD,

and the 4th Marine Division reached the southern edge of MAGICIENNE BAY. Transport escorts fueled from Oiler Task Units. At 1650 an Oiler Group was attacked by 10 planes. The NESHANIC and SARANAC sustained hits causing considerable damage and a number of personnel casualties.

8. June 19. A predawn enemy amphibious attack in boats from south GARAPAN was repulsed by LCIs and LVTs, sinking 13 loaded boats. Retirement Groups continued to operate to the eastward. Bombardment Group ONE fueled in this area. Carrier Support Group ONE, and Western Landing Group at the objective, at 0620, were attacked by enemy planes but no damage was sustained. Several enemy planes were shot down over SAIPAN. At 1000 a delayed message was received from the PBM search plane reporting sighting the enemy fleet to the westward during the night. Additional assault shipping was dispatched to the objective for unloading.

9. June 20. CHARAN-KANOA Airstrip and ASLITO FIELD were reported operational for emergency landings. UDTs commenced clearing mines from WHITE BEACH ONE. Assault shipping as unloaded was dispatched to ENIWETOK with suitable escorts. Dawn and dusk air strikes by our Carrier Groups hit GUAM, ROTA and TINIAN FIELDS. Most of the transports still having loads arrived from the Eastern Retirement Area. Artillery observation planes (OYs) started operation from CHARAN-KANOA Airstrip.

10. June 21. Heavy fighting continued ashore supported by close air, naval gunfire, and artillery fire. The unloading rate increased as beach and tide conditions improved. The escort Carrier Units made dawn and daylight strikes on TINIAN, GUAM and ROTA. Southern Attack Force units and a few of the Northern Attack Force continued operating on Eastern Retirement Area. Unloading continued on a 24-hour basis except for periods of air alerts.

11. June 22. At 0112 enemy planes were approaching. Flash RED was ordered and the smoke plan was executed. Twelve enemy bombers attacked the forces at SAIPAN, dropping bombs on shore and straddling the CLAY in the Transport Area. No damage was inflicted. The air alert continued until 0200. At 1128 the NEWCOMB attacked an enemy submarine and claimed a positive sinking. At 1242 the TENNESSEE and CALIFORNIA with escorts departed for ENIWETOK to replace ammunition. The 18th Army Fighter Squadron (P47s) landed on ASLITO FIELD and assumed responsibility for the CAP. At 1734 the CAP of Attack Group THREE destroyed an enemy plane 45 miles east of SAIPAN. A low-flying enemy plane launched a torpedo which struck the MARYLAND forward. She proceeded to PEARL HARBOR the next day, via ENIWETOK. BEACH GREEN was shelled at 2324 by enemy batteries on TINIAN and LST 119 was holed at the water line.

12. June 23. Enemy planes approached several times at a high altitude; they did not attack ships, but dropped bombs on the airfield, damaging several planes. Dawn air observation disclosed considerable enemy activity in GARAPAN TOWN and the northern area. Air strikes and naval and artillery gunfire were placed on these targets. At 0518 (-11) Garrison Group TWO with escorts departed from ENIWETOK for SAIPAN. The remaining elements of Fighter Squadron 19 landed on ASLITO FIELD at 0900. A reorganization of troop lines placed the 4th MarDiv on the right, the 27th InfDiv in the center and the 2nd MarDiv on the left. At 1005 the attack, supported by air, naval gunfire and artillery, moved forward rapidly. Resistance stiffened and the advance was held up at 1300. A photo reconnaissance over GUAM at 1114 revealed considerable activity. The carriers of a special Carrier Unit ferrying planes to the MARIANAS were attacked in the Eastern Operating Area at 1205 by four enemy planes. Carrier Task Group ONE launched an air strike against PAGAN at 1230.

13. June 24. At 0030 two small groups of enemy planes approached the transport area. Flash RED was ordered and the Smoke Plan was executed. Bombs were dropped in the inner anchorage. The PHAON, LST 222, PCS 1042, LCT 998 and PCS 1461 suffered personnel casualties and minor damage. Air bombardment, NGF and party preceded the 0800 troop attack which moved forward rapidly. Carrier Task Group FOUR made a strike on IWO JIMA with excellent results. CVE fighter and bomber sweeps over TINIAN and ROTA destroyed enemy targets. The transports did not retire for the night, nor did they retire thereafter but remained at anchor. At 1925 three enemy planes approached undetected and dropped bombs on the beach, causing only minor damage. Flash RED was ordered and the Smoke Plan was executed. From 1925 to 2208 transports and shore activities were intermittently under air attack. SAIPAN and TINIAN were kept under harassing and illuminating fire.

14. June 25. A coordinated troop attack at 0730 was supported by air, naval, and artillery units. The 2nd MarDiv advanced to the outskirts of GARAPAN and captured the top of MT. TAPOTCHAU. The 4th MarDiv advanced rapidly while the 27th InfDiv met heavy resistance in the difficult terrain in their

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zone. The 319th Fighter Group with the 19th and 73rd Fighter Squadrons and a detachment of the 6th Night Fighter Squadron were now based on and operating from ASLITO AIRFIELD. Garrison Group ONE arrived at SAIPAN at 1000. Carrier Task Group THREE made a heavy bombing attack on GUAM and ROTA in the afternoon. At 1700 Fire Support Group TWO with CruDiv 9 and escorts left for ENIWETOK to replenish ammunition. Reserve Group ONE retired to the westward for the night. Combatant ships provided cover from the westward and CVEs from the eastward. The BANCROFT reported 11 personnel barges moving off TINIAN TOWN which she dispersed by gunfire. The unloading of all Assault Shipping was completed on this date. Since DOG Day approximately 75,000 tons of supplies and 60,000 troops were landed.

15. June 26. Enemy positions were again under naval and artillery bombardment during the night. At 0225 LCI 438 and LCI 456 sank one enemy barge and damaged another one trying to come out of TANAPAG HARBOR. LCI 438 had one man killed and two men wounded, and LCI 456 had two men wounded. Both vessels received some damage. One LCI reported seeing torpedoes. Later, a POW said at least three torpedoes were fired at our ships this night. ASLITO AIRFIELD strip was lengthened to 4500 feet and widened to 300 feet. Equipment was moved to KAGMAN PENINSULA to start an airfield. Garrison Group TWO arrived at SAIPAN at 0800. Cruisers and escorts retired at 1830 to cover positions to the west. Ships bombarded both SAIPAN and TINIAN during the day and night. Enemy planes approached SAIPAN at 2040. Flash RED was ordered and the Smoke Plan executed. At 2059 parachute flares were dropped and at 2318 an enemy plane crashed in the anchorage after hitting the MERCURY in the superstructure with a torpedo and then striking her jumbo boom. Two area was under intermittent air attacks from 2059 to 0030. Carrier Support Group ONE in the operating area was under air attack; two torpedoes were launched at the CVEs but missed. Two screening DDs shot down one attacking plane. Radar pickets and the radar guard system of the screen were modified to facilitate the early detection of low-flying enemy planes.

16. June 27. The air alert continued until 0030. Naval bombardment and P47s destroyed many targets on SAIPAN and TINIAN. MinRon Four completed the sweeping of MAGICIENNE BAY, having found about 25 contact mines, some with very shallow settings. Carrier Task Group FOUR struck ROTA FIELD at 1600. At 1845 enemy planes were approaching; Flash RED was ordered and the Smoke Plan executed. The ships and units ashore were intermittently under air attack from 1845 to 0030. At 2000 five to eight bombs were dropped and at 2232 fifteen bombs fell in the transport area. At 2352 some bombs were dropped on ASLITO FIELD. No damage was sustained from any of these bombings. Raids on GUAM, ROTA and PAGAN were intensified to minimize enemy air raids. The FAST CARRIER TASK FORCE was requested to provide photo coverage of GUAM and to maintain night fighters over GUAM and ROTA during moonlight periods. Considerable quantities of smoke materials were consumed and immediate resupply was requested.

17. June 28. The usual dawn sweeps were made over TINIAN and SAIPAN and a strafing attack at 0800 hit enemy personnel on north SAIPAN. The enemy jammed our radio frequencies from 0700 to 0900. Our procedure was followed in general but there were no indications that our authenticator system was compromised. Ten thousand feet of LISP-2 net were laid by the KEOKUK off the entrance to TANAPAG HARBOR. Air strikes were made on TINIAN at 0940 by four P47s, at 1040 by 2 VTs and at 1600 by 16 VFs and 8 VTs. Three well-camouflaged operational aircraft were seen in the canefields on TINIAN and were destroyed. Five VTs attacked targets on SAIPAN at 1040 and at 1543. Twelve P47s strafed MARPI POINT AIRFIELD. Eight P47s at 1123 and 20 P47s at 1645 struck ROTA targets. At 2040 enemy planes were approaching; Flash RED was ordered and the Smoke Plan executed. From 2040 to 2137 our forces at SAIPAN were under intermittent air attack. ASLITO FIELD AA fire shot down one enemy plane, seen to fall, and claimed two others.

18. June 29. Air sweeps were made over TINIAN and SAIPAN AIRFIELDS at 0610, 0730, 1115 and at 1400. VFs and VTs struck designated targets on TINIAN. At 1600 seventeen P47s struck ROTA AIRFIELD, definitely cratering the field. Many gun positions were destroyed by these attacks, reducing AA fire considerably. 75 land mines were removed from PURPLE BEACHES by demolition personnel and UDTs. 15 ships were maintained in the area for fire support. Direct support was difficult due to irregular front lines. At 1830 Covering Groups ONE and TWO retired to the westward. Carrier Task Group FOUR maintained a night fighter patrol over ROTA from dark until 2300. Submarine torpedoes were fired at one of the escort carrier groups in the northwestern area. Their operating area was shifted to the eastward. All vessels not due to return to PEARL HARBOR were ordered to replenish their ammunition supply. No enemy air attack was made during the night.

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19. June 30. Air and naval bombardment gave excellent support, destroying numerous targets. During the day, 40 P47s attacked targets on SAIPAN and TINIAN, and 48 VFs and 12 VTs provided close support for the ground assault. At 0900 (-11) Carrier Task Group TWO and at 1300 (-11) Carrier Task Group ONE sortied from ENIWETOK for a strike on IWO JIMA. ROTA was hit by an air strike from ASLITO FIELD at 1500. The INDIANAPOLIS and the LOUISVILLE placed an intense bombardment on TANAPAG HARBOR and its defenses. The BIRMINGHAM continued to fire on TINIAN. ASLITO AIRFIELD was designated ISLEY FIELD in honor of the late Commander Robert H. ISELY, USN, who lost his life attacking this field then under enemy control. Carrier Task Groups THREE and FOUR struck ROTA and GUAM. At 1830 Covering Group ONE with cruisers and destroyers, less fire support ships, retired for the night. At 1949 enemy planes were approaching, Flash RED was ordered and the Smoke Plan executed. From 1949 to 0139 forces at SAIPAN were under air attack. One enemy plane was destroyed by our night fighters. At 2310 bombs fell in the GARAPAN Area.

20. July 1. The usual dawn sweeps were made on SAIPAN, TINIAN and ROTA. VFs carried out bombing and strafing missions on SAIPAN and TINIAN and completed a photo reconnaissance of TINIAN BEACHES. Fire Support Ships continued with call fire support. Covering Group ONE again retired to the westward.

21. July 2. At 0053 enemy planes were approaching, Flash RED was ordered and the Smoke Plan executed. From 0053 to 0215 forces at SAIPAN were under intermittent air attack by about 5 planes. These planes approached at low levels, using the land mass to conceal their approach. One plane was shot down by a screening destroyer, and one crashed while flying low to escape detection. Five enemy aviators from this plane were captured. No bombs were dropped. At 0700 a fleet oiler arrived at SAIPAN to fuel screening vessels and fire support ships. Numerous air strikes were made on SAIPAN, TINIAN and ROTA. Covering Group ONE again retired to the westward. Naval fire support ships continued to bombard SAIPAN and TINIAN. A DD from the transport screen sank one enemy landing craft and drove another one aground off MARPO POINT, TINIAN.

22. July 3. Four P47s made a sweep at 0530 on ROTA. Reports indicated the possibility of a large-scale enemy air attack and Carrier Support Group ONE was ordered to maintain all available aircraft on an alert status. A total of 52 sorties from Carrier Task Group FOUR hit ROTA. The field had been repaired. Carrier Task Groups ONE and TWO hit the BONINS. The attack was a complete surprise, but the enemy defense was strong and well conducted. Many enemy aircraft were destroyed. A total of 2 cruisers and 14 destroyers were used in fire support missions on SAIPAN. No enemy air attacks were made.

23. July 4. Four P47s hit ROTA at dawn and on returning executed local strafing missions. At 0730 a fleet oiler, an ammunition resupply ship and a XAP arrived at SAIPAN. Numerous air strikes were made on SAIPAN and TINIAN targets during the day. Fire support ships continued to bombard SAIPAN and TINIAN in support of ground operations. The Transport Screening Group was ordered to be prepared for an immediate concentration of destroyers to meet any fast enemy surface raids. At 2030 fire support ships were alerted for a possible enemy plane evacuation attempt from MARPI POINT. No enemy air attacks were made during the night.

24. July 5. During the day 19 VF, 8 P47 and 14 VT attacks were made on SAIPAN targets and 24 VFs, 7 VTs and 12 P47s struck GUAM objectives. Fire support ships continued to fire on both SAIPAN and TINIAN. The boat passage off RED BEACH THREE was cleared to seven feet and a five foot depth was reported at the Government Pier. At 1957 enemy planes were approaching, Flash RED was ordered and the Smoke Plan executed. From 1957 to 2040 the forces at SAIPAN were under attack by 3 to 5 planes. From the lack of aggressiveness, these planes were probably attempting air evacuation of key personnel. Night Fighter interception was unsuccessful. Covering Group ONE retired to the westward.

25. July 6. Forces at SAIPAN were alerted from 0020 to 0040 against an enemy air attack. Flash RED was ordered and the Smoke Plan executed. Only one enemy plane was involved, which apparently took off from MARPI POINT FIELD. Clearance of TANAPAG HARBOR was commenced by 2 AMs covered by a screening DD. One mine was swept in the channel. A total of 18 VF and 24 P47 attacks were made on SAIPAN support missions and 8 P47 attacks were made on TINIAN. The Commander of Minesweeper and Hydrographic Survey Group reported a 150-foot channel had been swept from TANAPAG CHANNEL to the northwest docks. The Service and Salvage Group proceeded clearing wrecked barges from the harbor and GARAPAN Pier. Seven ships of the Second Echelon of Garrison Shipping arrived at SAIPAN. At 1800 12 P47s made a sweep on ROTA. Enemy aircraft were reported approaching at 1955. Flash RED was ordered and the Smoke Plan executed. The forces

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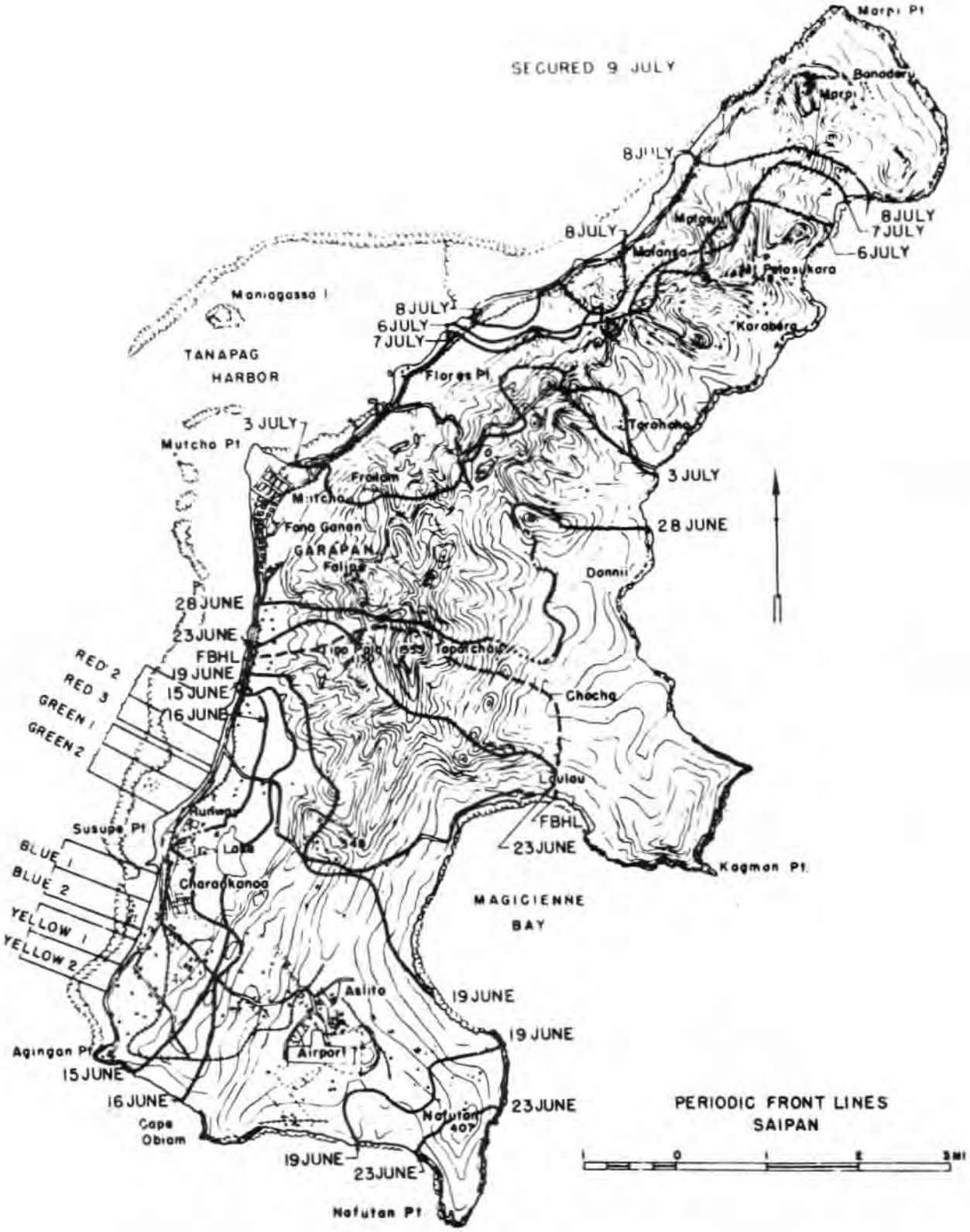

SAIPAN *(Cont.)*

at SAIPAN were intermittently under air attacks from 1935 to 0110. Two enemy planes were shot down by night fighters from the FAST CARRIER GROUPS. One enemy plane trailing Covering Group TWO was shot down by a screening DD.

26. July 7. At 0510 an enemy force estimated at 3000 troops launched a suicidal attack on the positions of the 105th Infantry. The 1st and 2nd Battalions bore the brunt of the attack and were completely overrun, as were also the guns of one battery of the 10th Marines. At 1100 remnants of these two battalions withdrew to the vicinity of TANAPAG POINT and sought refuge on the beach. Destroyers and small craft dispatched by the Task Force Commander removed 60 survivors and 1 POW from the reef. The attack was stopped at 1130 by elements of the 10th Marines, the 3rd Battalion, 105th Infantry and the 106th Infantry. At 0600 work was begun on the seaplane ramps in TANAPAG HARBOR. At 0730 the fast Battleships of TF 58 arrived at SAIPAN for a short stay. During the day 17 VFs carried out support missions on SAIPAN and attacked targets on TINIAN and GUAM. At 1623 COMFIFTHFLEET set 21 July as WILLIAM DAY for the attack on GUAM, and 24 July as JIG DAY for the attack on TINIAN. At 1945 enemy planes approached from the southwest. Flash RED was ordered and the Smoke Plan executed. From 1945 to 0007 forces at SAIPAN were under intermittent air attack. Three enemy planes were destroyed. 25 bombs were dropped near ISELY FIELD but no damage was sustained. This was the last enemy air attack on our forces during the Capture and Occupation Phase of the operation.

27. July 8. During the day P47s supported the assault on SAIPAN and attacked TINIAN targets. Six LSTs were made available to COMSERVRON 10 to haul fog oil, which was becoming critically low, from the MARSHALLS. At 1200 CruDiv TWELVE commenced the bombardment of GUAM in accordance with the softening-up program.

28. July 9. Concentrations of enemy in caves and on ledges were fired on and attacked by air, sea and ground elements. Advances were rapid and at 1615 it was announced that SAIPAN was captured and that all organized resistance had ceased. At 0930 MinRon FOUR swept area 4, north of MAGICIENNE BAY, sweeping 15 mines. At 1315 four resupply ships, including one loaded with ammunition, arrived at SAIPAN. Fire support ships fired counter-battery and call fire missions on the TANAPAG Area against enemy troops apparently seeking escape. Bombardment Unit THREE and Carrier Task Group ONE struck GUAM.

29. July 10. The GUEST had a definite submarine contact at 0300. Forty depth charges were dropped, resulting in a small quantity of oil. Contact was not regained. At 1000 a formal flag raising was held on SAIPAN. At 1200 CruDiv TWELVE commenced the bombardment of GUAM. Carrier Task Groups ONE and TWO dropped 40 tons of bombs on GUAM targets.

30. July 11. The SS ROCKLAND VICTORY with ammunition arrived at SAIPAN. During the day 16 P47 missions were flown over TINIAN. All shore artillery was concentrated at the southern end of SAIPAN for bombardment of TINIAN. V Corps Reconnaissance personnel and UDTs reconnoitered WHITE BEACH ONE between 2030 and 0300 covered by two DDs. CruDivs 9 and 12 were made available to the Southern Attack Force Commander for the WILLIAM DAY bombardment and the TENNESSEE and CALIFORNIA were made available for bombardment on WILLIAM minus one day to the afternoon of WILLIAM DAY. Heavy naval and air bombardment of GUAM was continued. This was maintained until WILLIAM DAY. G. R. TWEED RM1/c USN was rescued from GUAM by a destroyer. TWEED had been hiding on the island since the Japanese occupation.

GUAM

The action of the Supporting Forces for the occupation of GUAM was similar to that discussed in detail in the SAIPAN operation, and therefore will not be augmented in this bulletin in order to save space for the Lessons Learned.

The Naval Forces assigned to the Task Force Commander (CTF 53), by Commander in Chief, Pacific Fleet, were largely from the South Pacific Force and were, for the most part, engaged in the HOLLANDIA operation with the Southwest Pacific Force until 10 May, by which date the majority of the ships had returned to the SOLOMON Island bases and reported to CTF 53.

At 1100, 16 June, Commander Fifth Fleet cancelled 18 June as William Day and stated William Day would be redesignated. On 8 July, William Day was definitely set by Commander Fifth Fleet as 21 July.

During the reconnaissance missions, personnel from UDT-3 landed on the reefs during the night and approached to the actual shore line. Their operations were covered by the four LCI Gunboats close in on both flanks of the parent APD, DICKERSON. Flanking the LCIs were two destroyers, initially DEWEY and MacDONOUGH, later SIGSBEE and SCHROEDER. Cruisers and battleships backed up the destroyers.

On W-Day, 21 July, Fire Support Units arrived

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GUAM LANDING - 21 JULY 1944

1. The series of photographs which follow cover the initial landings on GUAM, and illustrate principal successive phases of this operation. All photos were taken in Southern area (beaches Yellow and White) except No. 2, taken of simultaneous operations in Northern area, but identical with a similar phase at southern beaches.

Transport Area—Loaded landing craft circling in boat group rendezvous prior to leaving for the Line of Departure.

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H Hour—Landing has been effected. Reef has broken up formation but is not proving great barrier to amphibious tractors. Boats in left center have finished landing troops and equipment and are regrouping for purposes of reorganization and reassignment. In extreme upper left boats are bringing in additional troops to augment and support assault waves. In upper right fire support group is standing by to provide call fire as requested.

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Line of Departure—Assault landing craft launched from LST's are orienting and forming waves for run in to beach. Stationary destroyer in center marks Line of Departure for all waves.

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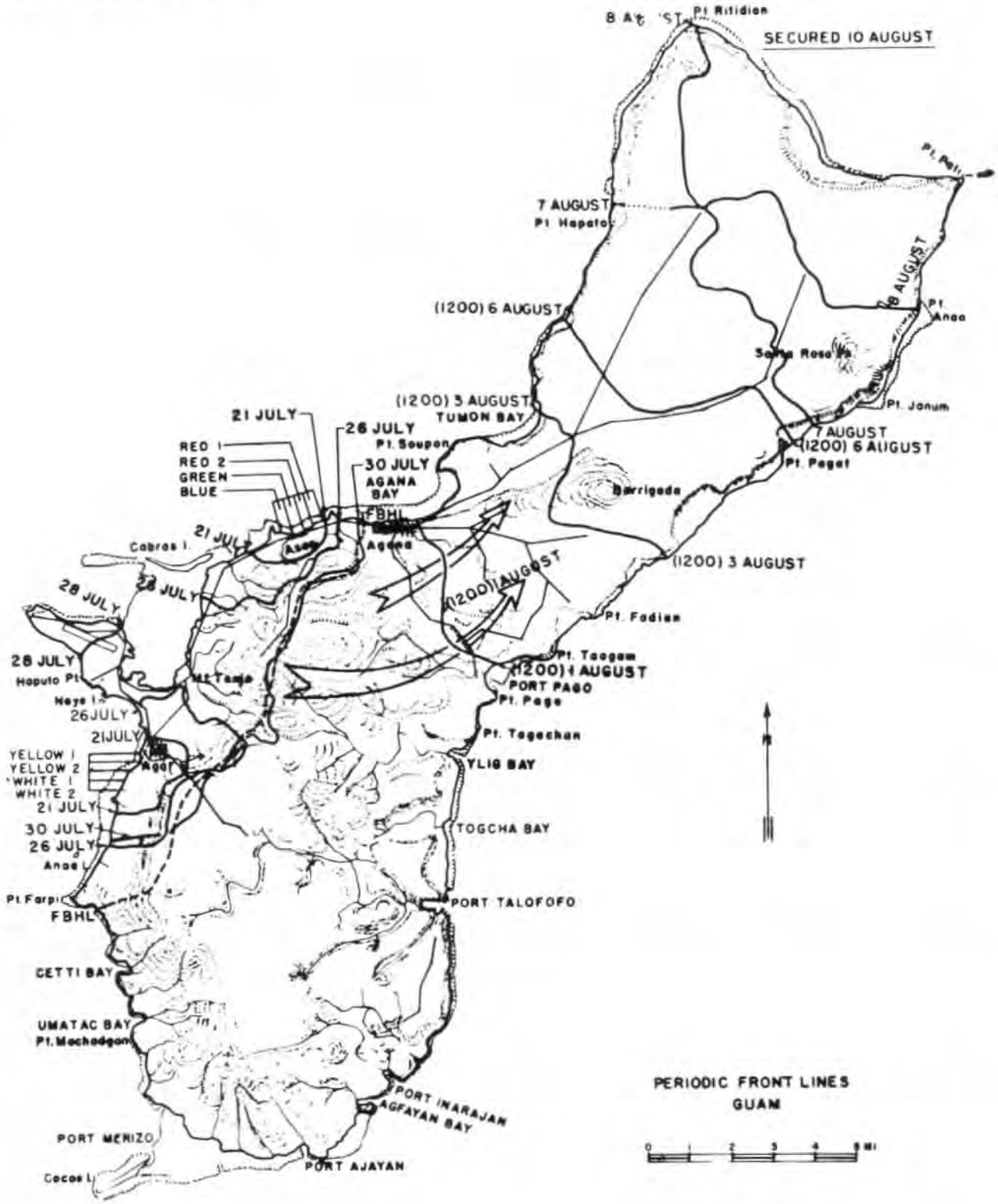

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GUAM *(Cont.)*

in assigned Fire Support Area and commenced prearranged bombardment at 0530. Transports and Tractor Groups arrived in assigned areas at 0600. The ship-to-shore movement was executed with perfect precision and exactly on schedule. (H-Hour was 0830 K). (See photographs pages 17 thru 19)

*Commander Task Force comments:*

1. The unusual features of this operation were:

(a) Prolonged, systematic reduction of defenses under the direct supervision, on the spot, of the Attack Force Commander. These defenses included coast defense batteries, antiaircraft batteries, both heavy and light, pillboxes and blockhouses, buildings on or flanking the landing beaches, and bunkers and trench systems; lastly and most formidable the beach obstacles that, if not removed, would have prevented the landing.

(b) The volume and closeness of support by both gunfire and air which was given to landings on both beaches.

(c) Amount of naval gunfire support and air support available to troop commanders on call.

(d) Unloading methods used for landing equipment and supplies from assault shipping, involving use of large numbers of self-propelled barges and an unusual number of small tractor cranes.

(e) Use of LCI(G)'s for close support not only of the landing but of demolition operations and, on call, for support of troops advancing along the shore.

2. All commanders of groups, units and ships of the Task Force engaged in this operation with the utmost zeal, determination and fighting spirit. The skill and precision with which they carried out their assigned tasks indicated a state of training far in advance of what could have been expected even one year ago.

3. The joint effort in planning, training and executing this operation developed the best relations between naval forces and troops yet seen. Such relations must be based on mutual respect and confidence and an appreciation of the other's part in the operations. The Naval Forces were filled with the conviction that nothing was to be spared to land successfully and to support effectively the fine troops that were to assault and capture the island objective.

TINIAN

The account of the action of the Supporting Forces for the occupation of TINIAN will likewise be curtailed in order to have more space for "Lessons Learned".

*Commander Task Force 52 comments in part:*

1. Our troops moved fast and gave them no opportunity to reorient their defenses to meet the attack from the north, the strong positions at ASIGA BAY being abandoned without a fight.

2. On the evening of 1 August (JIG plus EIGHT) the island was reported secured. The final count on own and Jap casualties is as follows: *Own:* KIA 290, WIA 1515, MIA 24, Total 1829. *Japs:* Buried 5524, POW 404, Civilians 13,262.

3. This operation was of particular interest because of the problems imposed by the extremely narrow beaches and also because of the use, for the first time, of Napalm fire bombs and of LVT ramps.

4. The speedy success of this operation demonstrates the great value of experience. There was no opportunity for rehearsal. Plans were prepared under pressure and distributed at a late date. However, the experienced ships, naval personnel and veteran troops involved had worked together before, and mutual cooperation and understanding were complete.

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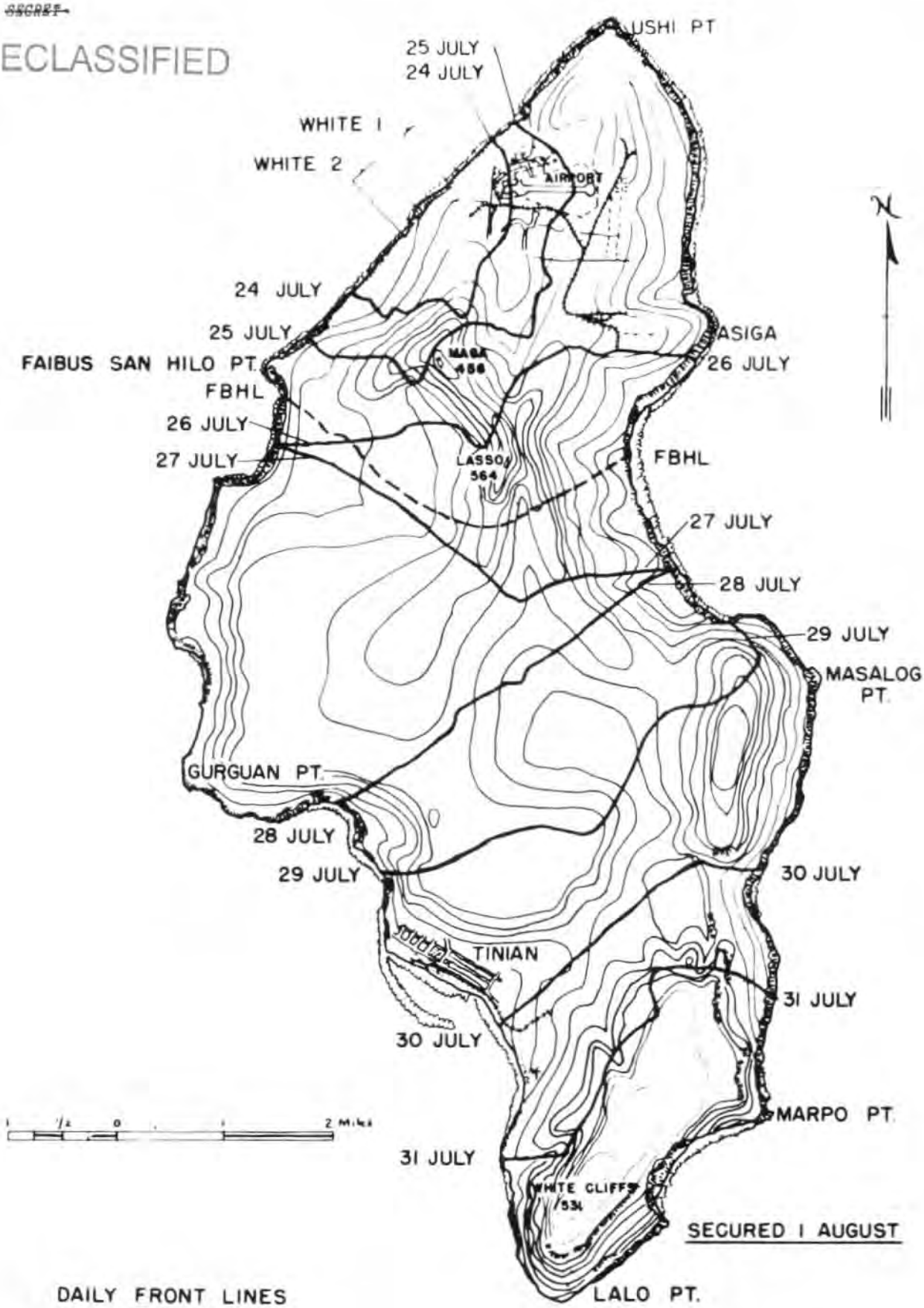


DAILY FRONT LINES
TINIAN

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## THE JAPANESE FLEET COMES OUT

The action against the Japanese fleet turned out to be all air, but due to the many surface combatant ships attached to TASK FORCE 58, the developments of the contact, the preparations for battle and the many problems facing the Task Force Commander, the many phases will be discussed in some detail. It will be remembered that the primary mission of Task Force 58 was to cover the landing operations and that at this time we did not have complete control of a forward base for cripples to take refuge.

*Commander Task Force 58 reports as follows:*

*I. POSSIBLE ENEMY COURSES OF ACTION*

1. In the early morning of Dog minus 2 day, 13 June 1944, Task Force 58 was proceeding to the area west of the MARIANAS, after having delivered a fighter strike on Dog minus 4 day and continuous strikes on Dog minus 3 day on the Japanese-held islands of GUAM, ROTA, TINIAN, SAIPAN and PAGAN. The Japanese by this time knew that they were being hit by a large carrier task force, and the number of planes over their islands must have been a fairly accurate indication of the number of our carriers involved in the operation.

2. The Japanese probably suspected, but did not yet know, that an amphibious operation was about to commence.

3. It was believed that the Japanese Fleet was disposed about as follows:

(a) HALMAHERA. One division of new battleships, one division of cruisers, and at least one squadron of destroyers.

(b) TAWITAWI. Three or four battleships, one, possibly three, divisions of carriers, one, possibly two, divisions of cruisers, about twenty destroyers, and some auxiliary vessels.

(c) Operating northwest of NEW GUINEA against MacArthur's forces in WEWAK were one, possibly two, divisions of cruisers, possibly one battleship, and some destroyers.

(d) There were supposed to be three replenishment forces, of which two were believed to be in the PHILIPPINES and one enroute to the PHILIPPINES. One replenishment force possibly was operating in the SURIGAO Area awaiting rendezvous orders.

(e) In the Empire and the north were three battleships, approximately seven heavy and light cruisers, two or three CVE's, plus destroyers and a considerable number of submarines.

(f) In the MARIANAS and Western CAROLINE Area were many Japanese submarines.

4. Of the three carrier divisions operating in the PHILIPPINES, two were not definitely located.

5. The Japanese had air bases in the MARIANAS, Western CAROLINES, PHILIPPINES and IWO JIMA.

6. The prevailing opinion in our fleet was that the Japanese navy would not fight for the MARIANAS. However, statements of prisoners, captured documents and statements made in the Japanese press combined with the peculiar psychological attitude of the Japanese, all pointed to the possibility of strong defense of the MARIANAS, with the navy participating provided there was sufficient oil available and tankers to carry it in. Many tankers had been torpedoed by United States submarines but some tankers were known to have reached oil fields of the NETHERLANDS EAST INDIES and to be available for fleet use. Very few of them, however, were capable of the speed necessary to operate with the fleet at sea.

7. In spite of the results of the analysis of the enemy intentions indicating that they would not risk their navy in a defense of the MARIANAS, our fleet had to be prepared for an aggressive, hard-hitting battle if the Japanese did venture to the eastward. A study of the chart of the area enclosing the Empire, the MARIANAS and the PHILIPPINES was made in order to determine the most probable line of approach of the Japanese fleet should it attack. There were air bases at IWO JIMA and CHICHI JIMA. These two air bases were to be hit on Dog plus 1 and Dog plus 2 days by our task forces, which strikes would probably destroy such planes as were on those fields as well as some aircraft facilities and would result in requiring several days for the Japanese to ferry planes into these fields from the Empire. MacArthur was turning his Liberators loose on PALAU and YAP, and although not all planes and aircraft facilities could be destroyed by this long-range bombing, it would result in harassing the enemy and reducing his air operations, and prevent the Japanese fleet from entering that immediate area for fear of attack by shore-based bombers. The Japanese air bases in the PHILIPPINES were not to be touched. The Japanese planes in the MARIANAS had been virtually destroyed by the previous day's carrier task force attacks, but the fields were operative and the facilities could not be completely demolished. More aircraft could be moved in.

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8. Japanese planes are designed for long range. Air cover for a task force could operate approximately 400 miles from land bases, and the entire area could be searched with comparatively short hops from several of their bases. GUAM and ROTA were in effect additional carriers permitting the Japanese to launch at long range and go to GUAM to refuel. The fact that ROTA, a new field, was not used, indicated lack of fuel at that base.

9. If the Japanese did propose to fight they had several courses of action open to them. All of these courses of action divided themselves into three major categories:

(a) They could approach from the general direction of DAVAO under their air cover from the PHILIPPINES, PALAU and YAP and strike our fleet from a southwesterly direction.

(b) They could approach around NORTHERN LUZON and strike from a northwesterly direction.

(c) They could approach easterly and strike from a position west of the MARIANAS.

10. They could approach from any of the above directions as a threat, attempt to employ attrition tactics, and with no intention of engaging in a major action. The northern approach was unlikely because of the additional time it would require, and the amount of oil consumed to get their fleet from the SOUTHERN PHILIPPINES to a striking position. The western approach through SAN BERNARDINO STRAIT was practicable. The southwesterly approach was the most probable because of the position of the Japanese force when the campaign started, the necessity of conserving fuel oil, and the equatorial weather front which existed from the PHILIPPINES to the north of PALAU eastward to the CAROLINES. In addition the Japanese could hit sooner by this route than any other, once they decided to oppose our fleet. Above all, they could operate under shore-based air cover during their approach, strikes and retirement. The greater number of enemy air bases on the southwesterly approach also would permit a more thorough search by a few planes than either of the other two approaches. It was therefore believed that if the Japanese navy fought, they would choose a southwesterly approach. This approach, as well as the others, was studied in order to determine whether or not the Japanese could execute a surprise maneuver and outflank our forces, which they had several times boasted of their ability to do. The trick was possible if their main body continued a direct approach while a small high-speed carrier unit ran close to ULITHI and attacked our forces from the southern flank or from the rear if the United States fleet went too far to the west without searching its southern flank. This southern area was to be searched by land-based aircraft from MANUS. However, this search was hampered by weather, was only a daylight search, and consequently was spotty. In order to be sure that our forces were not outflanked it would be necessary to conduct searches by carrier-based aircraft to the southwestward.

11. Even if the Japanese were successful in sending a portion of their fleet undetected to a position northeast of ULITHI it was believed that this was not a serious consideration so long as the major portion of the Japanese fleet could be engaged to the westward. The United States had a large force of old battleships, CVE's, cruisers, and destroyers which could successfully engage any portion of the Japanese fleet, other than their new battleships, in a surface action. In an air action the Japanese would have inflicted some casualties, but the number of fighters in the CVE's would have made this attempt by the Japanese extremely expensive to them. In addition, such a small diversionary force after it once attacked could no longer remain undetected. It could be defeated or beaten off by our forces concentrated primarily for the defense of the amphibious operation, or it would be outflanked by our Fast Carrier Task Force in a sudden reverse to the south if our carrier force was not then engaged with the main Japanese fleet. The worst that could probably happen would have been some losses on our side before the southern diversionary Japanese carrier force could be destroyed. The decision was then reached that even if the Japanese chose to make such a suicidal attempt, our forces could still attack the main Japanese fleet if it approached directly from the west or southwest. It was believed that this decision was in accord with the desires of the Commander in Chief to fight a decisive battle. It appeared that there was nothing the Japanese could do with their fleet to affect seriously the occupation of the MARIANAS so long as the Fast Carrier Task Forces could engage the major portion of the Japanese fleet. There appeared no reason for not steaming directly for the Japanese fleet as long as our Fast Carrier Task Forces were intact. Even the slight possibility of damage to our landing forces could be avoided if the Fast Carrier Task Forces did not go more than 300 miles from the MARIANAS without some definite indication as to the location of the main Japanese force, for we could attack a diversionary force as easily from a position 300 miles west (down wind) of the MARIANAS as we could from the near vicinity of SAIPAN.

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*II. OPERATIONS IN PREPARATION FOR THE ASSAULT AND CAPTURE OF SAIPAN*

1. On 13 June all four Task Groups of Task Force 58 made repeated air strikes against the MARIANAS while the battleships and some destroyers bombarded SAIPAN, covering the minesweeping operation. The minesweeping, being close inshore, must have indicated to the Japanese that this operation was not merely a hit and run strike.

2. Indication of movement of the Japanese fleet for possible countering action was looked for, and our submarines were strategically placed to give early warning of any approach by the enemy. On 13 June one such submarine reported that four battleships, six CV's, eight cruisers and six destroyers departed TAWITAWI and headed north through SIBUTU. It was possible that this force was to pick up an additional carrier division. Later on the same day it was believed that the battleship and cruiser force in the HALMAHERAS had headed north.

3. On the night of 13 June Task Groups 58.2 and 58.3 retired to the northwest of SAIPAN, and on the morning of 14 June these two Task Groups had returned to a position southwest of TINIAN and were conducting air operations primarily against SAIPAN, GUAM and ROTA. On this day, destroyers of the two Task Groups were refueled so that they would have sufficient fuel to conduct a battle. A few enemy search planes were shot down. These enemy search planes probably reported the position of the Task Force.

4. Task Groups 58.1 and 58.4 were enroute to IWO JIMA.

5. Battleships, cruisers, and destroyers of Task Force 51 were methodically bombarding SAIPAN. There was no air opposition and little anti-aircraft fire. The greatest danger to our planes on this day was the danger of collision with own spotting planes over the islands.

6. On 14 June there was no further indication of movement of the enemy fleet.

7. On 15 June the amphibious forces landed on SAIPAN and were given air support by Task Groups 58.2 and 58.3. Task Groups 58.4 and 58.1 conducted fighter sweeps over CHICHI JIMA and IWO JIMA.

*III. THE ENEMY REACTS.*

1. On the evening of 15 June, at about the time the carriers were recovering their planes and while heading on a southeasterly course, several bogeys appeared from the westward. This developed into an aggressive torpedo attack by about a dozen planes thought to be Milky Way or Frans. Although their attack was pressed home and there were many close misses, no ship was torpedoed, and at least seven of the attackers were shot down. By this time the landing operation by our huge amphibious forces was under way and the Japanese could no longer be in doubt that we were endeavoring to capture SAIPAN. Their torpedo attack, by planes probably brought into the area, indicated that they were beginning to assemble all the power they could to repel the attack, and start their attrition tactics on our fleet.

2. During the night of 15-16 June information received from a submarine revealed that enemy battleships and at least three carriers passed through SAN BERNARDINO on an easterly course at speed 20 at 1900 the 15th. (The next night information received definitely included nine carriers in this force). Another submarine the same night reported that an enemy force was in Lat. 10° - 11' N., Long. 129° - 35' E., on course 045°. The composition of this force was unknown but it was thought to be the force which departed PATJAN Island. It appeared that the Japanese were either going to fight or feint.

3. On 16 June Task Groups 58.1 and 58.4 struck IWO JIMA, hampered somewhat by bad weather. After their strike both Task Groups retired toward the MARIANAS on orders of Commander FIFTH Fleet, based evidently on his desire to have our forces concentrated in the MARIANAS against the likelihood of the enemy fleet coming out in force W-day was also indefinitely postponed. On this day, Task Groups 58.2 and 58.3 both fueled as a result of a request made by Commander Task Force 58 to Commander FIFTH Fleet. The task groups fueled to the west of the MARIANAS in order to be closer to the Japanese fleet than the fueling areas previously prescribed would allow, and so that searches could be made by carrier-based aircraft to cover the southerly and westerly approaches. On this day the following information was passed to the Commanders of Task Groups 58.2 and 58.3 by Commander Task Force 58:

> Believe Japanese will approach from a southerly direction under their shore-based air cover close to YAP and ULTHI to attempt to operate in the vicinity of GUAM. However, they may come from the west. Our searches must cover both possibilities. Will ask CTG-58.4 and CTG-58.1 to search north and west of us tomorrow.

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Also a special strike was ordered against GUAM airfield to destroy aircraft and to crater the runway so as to prevent enemy aircraft from landing.

*IV. PREPARING FOR THE CONTACT.*

1. The following despatch was sent to Commander Task Group 58.3:

"Expect to launch night search from position as far west as practicable at 0130 June 17th".

Since the Task Groups were farther east upon the completion of fueling than had been anticipated, due to the necessity for fueling into the wind, they were ordered to make 23 knots in order to gain as much distance as practicable to the westward. Because of our easterly position, orders were modified and the night search was launched at 0200. The Task Groups remained on a westerly course until 0430 and recovered the search at 0700 17 June. The search had made no contact.

2. At 0700 17 June the Task Groups conducted a 325-mile search between bearings 215° and 285°. Task Groups 58.1 and 58.4 were instructed to search the area between Lat. 15° N. and Lat. 20° N., and as far west as feasible. These two groups were subsequently to keep the area east of 138° and south of 20° searched until they joined Commander Task Force 58. Commander FIFTH Fleet ordered a minimum of air operations for Task Force 58 on 17 June. Commander Task Force 58 had requested two cruiser divisions and four squadrons of destroyers in order that the battle line might be taken out of the carrier task groups, concentrated in a separate Task Group and be ready for immediate action against major enemy surface forces. Commander FIFTH Fleet assigned CruDiv-6, CruDiv-12, DesRon-45 and DesDivs-1, 12 and 106. It was recommended to Commander FIFTH Fleet that the task groups be composed as follows:

(a) Present Status:

(1) Task Group 58.2 is 12 miles south of Task Group 58.3.

(2) Task Group 58.3 will be in Lat. 15° N., Long. 144°-30' E. at 1600 today (17 June).

(3) A search was launched at 1330 distance 325 miles, between bearings 215° and 285°. This search is to be recovered about 1830 in vicinity Lat. 15° N., Long. 144°-30' E.

(b) Recommended disposition upon the joining of forces from Task Force 51:

(1) Task Group 58.2 composed of carriers, CruDiv-13, DesRon-52, DesDiv-1; 12 miles south of Task Group 58.3.

(2) Composition of Task Group 58.3: carriers, CruDiv-12, DesRon-50 and DesDiv-90.

(3) Task Group 58.7 composed of battleships, CruDiv-6, DesDiv-12, (16 torpedoes each), DesDiv-89 and DesDiv-106; stationed 15 miles west of Task Group 58.3.

(c) (1) If battle is joined before Task Groups 58.1 and 58.4 join us, Task Group 58.2 will be designated battle line carriers.

(2) When Task Groups 58.1 and 58.4 join, propose to put Task Group 58.1 12 miles north of Task Group 58.3 and Task Group 58.3 and Task Group 58.4 12 miles south of Task Group 58.2.

(3) As soon as Task Group 58.1 and 58.4 join, propose to have SAN JUAN join Task Group 58.2 and RENO join Task Group 58.3 so that one CL(AA) will be with each carrier group.

(4) If battle is joined after Task Group 58.1 and 58.4 join us, Task Group 58.4 will become battle line carrier group.

(5) After first air battles have been fought and we have control of the air, recommend CruDivs-10, 13 and 12 and DesDivs-11, 1 and 90 be released from carrier groups to join Task Group 58.7.

(6) After initial air battle, or before if it becomes feasible, recommend Task Group 58.1 take station about 50 miles to north-northwest of Task Group 58.3 in order to hit Japs from northern flank and to cut them off from escaping to the north.

(d) Recommend movement tonight: at 1800 course 310° until reaching Lat. 16° N., then course 270° until after daylight launch. It is hoped this will permit us to flank the enemy, keep outside of 400 miles range of YAP and keep as far from other shore-based air flown in to ROTA and GUAM as practicable, and still be in a position to hit enemy carrier groups (down wind from us).

(e) As soon as things quiet down a bit, one Task Group at a time should be refueled in vicinity of MARIANAS, during which time it

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can assist Task Force 51 on GUAM, ROTA, or SAIPAN as directed.*

These recommendations were approved by Commander FIFTH Fleet.

3. The following battle-plan despatch was received from the Commander FIFTH Fleet:

Our air will first knock out enemy carriers as operating carriers, then will attack enemy battleships and cruisers to slow or disable them. Task Group 58.7 will destroy enemy fleet either by fleet action if enemy elects to fight or by sinking slowed or crippled ships if enemy retreats. Action against the retreating enemy must be pushed vigorously by all hands to ensure complete destruction of his fleet. Destroyers running short of fuel may be returned to SAIPAN if necessary for refueling. Commander Task Force 58 pass to Commander Battleships Pacific, and Carrier task groups.

4. It was the intention of Commander Task Force 58 to make good distance to the west during the night in order to be able to operate aircraft while on an easterly heading during the following day and rendezvous with Task Groups 58.1 and 58.4 on 18 June. The same general plan was expected to be followed on each succeeding day so that if the winds were light and the launches long we could keep to the west and intercept an enemy attack beyond the range at which the enemy could strike SAIPAN. This was briefed in paragraph four (4) of the memorandum to Commander FIFTH Fleet.

5. Commander Task Force 58 sent the following despatch to Task Force 58:

Proposed plan for strike on enemy surface forces: Make deck-load launch from CV's consisting of 16 VF, 12 VB and 9 VT. Second deck load 16 VF and available VB and VT. Second deck load prepared for launch as second wave unless situation indicates delay advisable. Augment VT from CVL's as practicable. Arming VT half torpedoes, VB half GP, half SAP. Later strikes include AP as targets indicate.

6. At 1330 another search was made for 325 miles between 215° and 285° from Lat. 14°-45' N., Long. 144°-13' E. This search was negative. Several enemy planes were shot down during the day. These planes probably reported our position.

7. The cruisers and destroyers from Task Force 51 joined, and the battleships with their destroyer squadrons were ordered to take station to the west of Task Group 58.3, distance 15 miles.

8. When the cruisers reported, Commander FIFTH Fleet joined Task Group 58.3. In answer to request for movements during the night, the following despatch from him was received:

Desire you proceed at your discretion, selecting dispositions and movements best calculated to meet the enemy under most advantageous condition. I shall issue general directives when necessary and leave details to you and Admiral Lee.

9. The battleships were taken out of Carrier Task Groups in order that they might be ready for a surface battle without having to form. They were placed toward the enemy from the center Carrier Task Group at maximum communication distance. It was realized when this was done that the defense of the carrier groups from aircraft attack would be lessened by this disposition, but it was believed that one division of cruisers and one squadron of destroyers could offer considerable protection to the carriers even though the heavy anti-aircraft batteries of the battleships might be sorely needed. This was done in order to save the several hours necessary to form the battle line and in order to take every opportunity to engage the enemy surface force with our superior battle line.

10. Received Commander in Chief, Pacific Fleet's heartening despatch to Commander FIFTH Fleet:

On the eve of a possible fleet action, you and the officers and men under your command have the confidence of the naval service and the country. We count on you to make the victory decisive.

11. PBM's were to search from SAIPAN for 600 miles between 255° and 295° on the night of 17-18 June. Several enemy aircraft DF positions were obtained from the westward and southwestward.

12. Commander Task Force 58 informed the Task Force that no more strikes would be made on shore targets unless otherwise ordered and to be prepared for strikes on enemy surface forces.

13. Commander Task Force 58 informed Commander FIFTH Fleet that he was going ahead with his regular plan and expected to rendezvous with Task Groups 58.1 and 58.4 about noon 18 June in Lat. 15° N., Long. 143° E.

14. The Task Groups took course to the northwest until midnight and then went west along Lat. 16° N. An 0535 search between 195° and 275° was planned to cover 325 miles. Task Groups 58.1 and

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58.4 were to cover areas north of our northern sector.

*V. CAVALLA SPOTS ENEMY FORCE*

1. At about 0345 on 18 June information was received revealing that CAVALLA had spotted an enemy task force of 15 or more vessels in Lat. 12°-23' N., Long. 132°-26' E., course 090°, speed 19 knots. At this speed the enemy would be approximately 660 miles from SAIPAN at dawn and 500 miles from our 0530 position. We could scarcely hope to locate and strike the enemy on the morning of the 18th. However, by steaming directly for the enemy's possible 1500 position, we could possibly locate the enemy during the afternoon search, and perhaps, if he maintained his course and speed, hit him with one strike late in the afternoon.

2. At this time, however, two of the Task Groups were quite far eastward and a 1200 rendezvous was planned. It was highly desirable to effect the rendezvous as early as possible before meeting the enemy in a decisive battle, either air or surface. This rendezvous could not be effected if Task Groups 58.2 and 58.3 steamed southwest toward the enemy, who, if we did close, could launch strikes against us just as quickly as we could against him. The situation presented a clear choice:

(a) Steaming southwest would extend our afternoon searches to cover more of the enemy's possible movements, would perhaps bring our two groups, as well as the enemy, within striking range, and would at least afford the opportunity of shadowing the enemy by night in preparation for operations the next day.

(b) Going southeast for a rendezvous would effect concentration of forces and would allow an afternoon search which would pick up the enemy only if he continued at approximately his present speed.

The decision to rendezvous to the southeast was made, to concentrate our forces. The advantages of having available in a striking position the concentrated air strength of the Task Force for the initial strike if the enemy launched a long-range attack were quite obvious.

3. Task Groups 58.1 and 58.4 previously had been instructed to close on Long. 144° E., the expectation at the time of these instructions being that fueling would take place on the 17th or early on the 18th. Commander FIFTH Fleet later instructed these two Task Groups to refuel as necessary from oilers which would be at Point DOHENY, northeast of SAIPAN, at 0600 18 June on course 260°; thus it appeared that the rendezvous might be later than expected.

4. At any rate, CAP was instructed to contact Task Groups 58.1 and 58.4 and tell them to rendezvous to the west. Task Groups 58.2 and 58.3 came to a southeasterly course at 0700, hoping to make an early contact with the other two groups so that course to the west could be set.

5. At about 0730 an urgent despatch from CAVALLA was received. It appeared that she had contacted, and was chasing at high speed, the major portion of the enemy fleet which was on course about 080°, speed 19 knots. At 0630 CAVALLA was still trailing the enemy and had not regained contact. Her position at that time was Lat. 12°-29' N., Long. 134°-30' E. The enemy track laid down from this information checked closely with the track estimated earlier in the day, other than the estimated bearing of the enemy from us. The Japanese were right on schedule and if they kept coming, our afternoon search would pick them up at 300 miles about 1530. Therefore, if we closed during the afternoon and night, and the enemy wanted to close and fight, a night surface action was quite possible.

6. Therefore Commander Task Force 58 sent the following despatch to Commander Battleships Pacific:

> Do you desire night engagement. It may be we can make air contact late this afternoon and attack tonight. Otherwise we should retire to the eastward for tonight. I am requesting Task Groups 58.1 and 58.4 to join today.

In answer to this despatch the following was received:

> Do not repeat not believe we should seek night engagement. Possible advantages of radar more than offset by difficulties of communications and lack of training in fleet tactics at night. Would press pursuit of damaged or fleeing enemy, however, at any time.

7. In addition to the answer from Commander Battleships Pacific, the following despatch was received from Commander FIFTH Fleet:

> TF58 must cover SAIPAN and our forces engaged in that operation. I still feel that main enemy attack will come from the westward but it might be diverted to come in from the southwestward. Diversionary attack may come in from either flank or reenforcements might

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come from the Empire. Consider that we can best cover SAIPAN by advancement to the westward during daylight and retiring to the eastward at night so as to reduce possibility of enemy passing us during darkness. Distance which you can make to the westward during day will naturally be restricted by your air operations and by necessity to conserve fuel. We should, however, remain in air supporting positions of SAIPAN until information of enemy requires other action. Your despatch, consider seeking night action undesirable initially in view of our superior strength in all types but earliest possible strike on enemy carriers is necessary.

*VI. PREPARATIONS FOR CONTACT WITH THE ENEMY.*

1. Radar contact with Task Groups 58.1 and 58.4 was made about 1030 on 18 June and TPS contact was made shortly afterward. Task Group 58.1 was instructed to take station 12 miles north of Task Group 58.3, which put the three Carrier Task Groups on the north-south line of bearing, which was perpendicular to the general direction of the wind and which would permit flight operations by any one of the Carrier Task Groups without interfering with the other Groups. Task Group 58.4 was designated as the battle line carrier group with instructions to operate as directed by Commander Battleships Pacific (CTG 58.7), furnish CAP, ASP, and other air operations desired by him, with a request that this carrier group make such strikes against the enemy as consistent with the duties of battle line carriers in order to keep the decks clear. Task Group 58.4 was told to take station north of Task Group 58.7. As soon as the rendezvous was effected, course 255° was set in order to gain as much westerly as possible. Searches were again launched at 1330 for 325 miles between bearings 185° and 315°. Search was again negative.

2. In order that plenty of maneuvering room would be available to carrier groups, they were instructed to take distance 15 miles at 1800 and maintain that distance until 2030 unless attack developed. The rendezvous was set for 0800 19 June in Lat. 14°-45' N., Long. 143°-30' E. Ships unable to continue battle were to withdraw on a north-easterly course and to retire to north of SAIPAN. Commander Task Force 58 informed the Task Force that all planes would be recovered prior to dusk and that the Task Force would then head into the setting sun until about 2030, at which time the course would be reversed to 080° in accordance with Commander FIFTH Fleet's previous directives for an easterly retirement. This was desirable since the best position for torpedo attack is from dead ahead, which would require the Japanese planes to come out of the lightest part of the horizon if they launched a dusk attack.

*VII. ENEMY FLEET POSITION REVEALED.*

1. At 2245 the evening of 18 June, while Task Force 58 was steaming easterly, information was received in a despatch from Commander in Chief, Pacific Fleet, that the Commander in Chief of the Japanese First Mobile Fleet had been located by DF in Lat. 13° N., Long. 136° E., at 2023. This placed the enemy roughly 355 miles west-southwest of our force.

2. From this information and earlier reports including that of CAVALLA, it thus appeared that the enemy force and our own, both steaming east at nearly the same speed, would maintain the distance which separated them at the time of the DF report. This distance was unfortunately too great to permit a strike by our carrier-based aircraft, whose ideal launching position would be 200 to 150 miles from the enemy. The Japanese, however, were not under the same disadvantage, for their carrier-based aircraft have greater striking range than ours and could attack at the existing range, especially in view of their additional advantage in this instance of being able to launch strikes at long range, which at conclusion of attack would fly to the nearby MARIANAS for refueling before returning to their parent carriers.

3. It thus appeared desirable for us to endeavor to close the range to within air-striking range as of time for a pre-dawn take-off and dawn arrival at target for attack. This would also serve to increase the rapidity with which our battleships could close for surface engagement or cripple hunt.

4. The possibility had to be considered that the enemy might increase his speed or that he might be at the eastern or southern extreme of the DF radius, and would endeavor to by-pass us in his easterly progress in efforts to interfere at SAIPAN. Such a move on his part would, however, be certain of discovery by our searches inaugurated for the purpose, and the enemy would then find himself in great danger of being cut off should we move to place our forces between him and his bases. (A search between 185° and 345° had previously been ordered to launch at 0530.)

5. As Commander FIFTH Fleet had already pointed out in his despatch relating to night engagement, the carriers were restricted to but little westerly (downwind) progress during daylight due to flight operations, and night time presented our

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best opportunity to close the enemy to within striking range of our planes before he could strike at use with his.

6. In order to gain as much advance confirmation of the enemy's position as possible, Commander Task Group 58.3 was ordered to launch a search and attack mission of 14 torpedo planes at 0200 to make maximum practicable distance between true bearings 240° and 270°.

7. It was calculated that the indicated probable course and speed of the enemy fleet, if combined with a reversal of course to the west on our part, would result in our force attaining the ideal striking distance of 200 to 150 miles at 0500. Accordingly, the following proposal was submitted to Commander FIFTH Fleet at 2325 by TBS:

> Reference (CinCPac despatch) propose coming to course 270° at 0130 in order to commence treatment at 0500. Advise.

At 0038, Commander FIFTH Fleet replied as follows:

> Change proposed in your TBS message does not appear advisable. Believe indication given by STINGRAY more accurate than that contained in (CinCPac despatch). If that is so, continuation as at present seems preferable. End run by other fast ones remains a possibility and must not be overlooked.

(NOTE: The STINGRAY indication referred to was not held by Commander Task Force 58. Later inquiry disclosed that it was a despatch from Commander Submarines Pacific Fleet, telling STINGRAY that one of that submarine's despatches had been rendered unreadable by enemy jamming. STINGRAY'S known position was about 80 miles south of the enemy fleet track indicated by the DF report and some distance to the east).

*Commander FIFTH Fleet comments:*

Further reasons for adhering to the previous decision to retire to the eastward were:

(a) The position of the force located by direction-finder bearings was not definite, being within 100 miles.

(b) The originator of the enemy radio transmission was not known positively.

(c) The size and composition of the enemy force concerned was not known.

(d) It was of highest importance that our troops and transport forces on and in the vicinity of SAIPAN be protected and a circling movement by enemy fast forces be guarded against.

(e) There was the possibility that the enemy radio transmission was a deliberate attempt to draw our covering forces from the vicinity of SAIPAN.

(f) The fact that a STINGRAY transmission at 2346K in the vicinity of Latitude 12-20 N, Longitude 139-00 E, had been jammed by the enemy indicated that STINGRAY might have made contact in that vicinity. STINGRAY'S position was 435 miles, 246° from SAIPAN.

*VIII NIGHT AND MORNING SEARCHES NEGATIVE.*

1. The Task Force continued easterly, and at 0200 on the 19th Commander Task Group 58.3 launched his 14 plane search between 240° and 270°, which returned without having made contact. The scheduled 0530 search to 325 miles between 185° and 345° produced negative results. Apparently the enemy had chosen to maintain the interval of the previous evening, and was not attempting to pass around our force to southward.

2. A search by PBM's originating at SAIPAN and covering sectors between 245° and 295° had made visual contact with a large group of enemy ships in Lat. 13° - 40' N., Long. 136° - 48' E., and in Lat. 13° - 20'N., Long. 137° E., but unfortunately this contact report was delayed until 0914 on the 19th in reaching Commander Task Force 58.

3. Commander FIFTH Fleet requested that the following despatch be sent to Commander Task Group 52.2 at SAIPAN by message drop:

> Get additional patrol planes as soon as you can handle them. Increase night search to 700 miles.

This was delivered about noon on 19 June.

*IX AIR BATTLE OVER GUAM. JAPANESE CARRIER PLANES ATTACK TASK FORCE.*

1. Early in the morning of the 19th, Commander FIFTH Fleet stated that if the morning search did not develop targets he believed that neutralization strikes on GUAM and ROTA might be profitable. Commander Task Force 58 replied:

> Cannot neutralize ROTA and GUAM due to lack of bombs. Believe best we can do is to watch situation with fighters until they are tired of sending them in. We will have to

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do something when they start sending them in from the north thru PAGAN. This looks like it would be a long process until our own fields are established and we can turn searches over to land and seaplanes.

Bogeys started to appear early in the morning to the southwest, heading toward the fields in the MARIANAS. No planes were definitely identified as being carrier-based planes. At about 0700 our planes reported that quite a few planes were taking off from GUAM and fighters over GUAM requested help. Additional fighters were sent to GUAM to handle the situation. However at 0720 the fighters over GUAM reported that they were still badly outnumbered and many ZEROS were in the air, and wanted more help. More help was sent to them. It was apparent by this time that we were probably due for a working over by both land-based and carrier-based planes, and it was desirable for us to destroy as many land-based planes as possible before the carrier-based planes came in. At about 0800 a large group of bogeys, distance 81 miles bearing to the southwest, was detected on its way to GUAM. The fighters over GUAM were reenforced and by 0824 the enemy was being intercepted. By 0930 many enemy planes had been shot down over GUAM, but reports were received that planes were seen to be taking off from fields in waves and that there were still planes on the field.

2. Some bogeys began to appear to the northwest and by 0950 they were all around the horizon. At 0959 large groups of bogeys were detected 130 miles to the westward. This was the beginning of the carrier plane attack. At 1004 fighters over GUAM were given a "HEY RUBE" and the Task Force started launching additional fighters. At 1023 the Task Force was turned into the wind and was instructed to fly off bombers and torpedo planes on deck to rendezvous to eastward of the disposition. The flight decks were to be kept clear of everything but fighters. Fighters were to be rotated in the air, landed, rearmed, reserviced and relaunched in order to keep a large number of fully effective fighters available for a prolonged battle. To do this the Task Force had to maintain its course into the wind.

3. Interceptions were made 50 to 60 miles from the disposition. Groups of enemy planes varying from a few to 70 planes came in from the westward. Repeated attacks were experienced. The fighters did a magnificent job and broke up all attacks before they reached the Task Force. After the first attacks the Japanese were heard to order strikes to approach on course 300°. They had discovered the battle line was to westward of the carrier groups and they were gunning for carriers. Some small groups of enemy planes were able to make attacks but most of them were shot down by ships' gunfire. (See photographs pages 33 thru 38). The air battle continued with varying intensity until about 1500, by which time the enemy had lost approximately 350 planes. The Task Force was approaching the lee of GUAM, so instructions were given to make as much westerly as possible but not to let this interfere with the landing or launching of fighters. In the meantime the deck loads of bombers and torpedo planes in the air were given orders to bomb the fields on GUAM and ROTA, which they effectively did. Enemy planes were landing on GUAM and ROTA, and fighters were also sent to this area in order to destroy as many planes as possible. Enemy planes were contacted and shot down in varying numbers until about 1900. Our planes were then recovered and the Task Force headed on a westerly course.

4. This air battle resulted in no material damage to the Task Force that affected battle efficiency, although the Task Force was in the very unfortunate position of having to fight a defensive battle close on the lee side of enemy land bases to which carrier planes could be shuttled, and on the windward side of enemy carriers. Favorable consequences resulted only because of the superior ability of the fighter pilots and fighter director officers, combined with good luck.

5. During the day information was received that a SoWesPac search plane had sighted two carriers, two cruisers, and destroyers at Lat. 12°N., Long. 137° - 30' E., course 170°, speed 25. CAVALLA reported that she had put three torpedoes in a SHOKAKU class carrier at Lat. 11°-50' N., Long. 137°-52' E., course 115°, speed 25. The carrier was accompanied by two CA's. During the battle another 325 mile search between 185° and 345° was made with negative results except for enemy search planes, many of which were shot down.

6. Task Group 58.4 was commencing to run low on fuel, so it was ordered by Commander Task Force 58 to a fueling rendezvous and to make minor strikes on GUAM and ROTA. This Task Group was to keep the air over GUAM and ROTA clear of enemy planes and was sufficiently strong, after the enemy's losses in the air battle, to prevent any enemy carrier force from attacking the amphibious forces on SAIPAN.

*I THE NIGHT AFTER THE AIR BATTLE.*

1. The following was received from Commander FIFTH Fleet with respect to operations the following day, 20 June:

Desire to attack enemy tomorrow if we know his position with sufficient accuracy. If

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> our patrol planes give us required information tonight no searches should be necessary. If not, we must continue searches tomorrow to ensure adequate protection for SAIPAN. Point option should be advanced to the westward as much as air operations permit.

As soon as planes could be recovered, course 260°, speed 23 was set. This course was about 10 degrees to the north of the estimated bearing of the enemy, since it was expected that he would retire to the northward with his damaged carrier if she was still afloat.

2. Commander Task Group 58.7 was instructed to take station bearing 270° from Task Group 58.3, distance 25 miles, and to provide linking vessels. He was informed we expected to come to a westerly course after recovery. In view of the report of CAVALLA, Commander Task Force 58 instructed the Task Group Commanders to launch a true sector search at 0530 on the 20th between bearings 205° and 325° and at the same time to be prepared to launch a deck-load strike to proceed down the median of sector assigned, to maximum distance. Our search planes, when they returned, reported that they had a heavy fight with carrier-based planes in Lat. 12° - 20' N., Long. 141° - 26' E., at 1530. It was believed that these carrier-based planes were enroute to GUAM. These enemy planes were probably later attacked over GUAM, or may have been one of the groups which attacked the Task Force. Their position indicated that the estimated position of the enemy force was reasonably accurate.

*XI SEARCHING FOR THE RETIRING ENEMY*

1. At daylight on the 20th the Task Force was in position about Lat. 13° 40' N., Long. 141° E. The morning search was launched at 0525. The force continued west at the highest practicable speed.

2. Ships of the Task Force were soon going to require fuel, particularly destroyers. The following despatch was sent to Commander FIFTH Fleet:

> Recommend that fleet oilers, protected by Task Group 58.4, head west as soon as possible.

About 0800 the 20th the following despatch was received from Commander FIFTH Fleet:

> Damaged ZUIKAKU may be still afloat. If so, believe she will be most likely heading northwest. Desire to push our searches today far to westward if possible. If no contact with enemy fleet results, consider it indication fleet is withdrawing and further pursuit after today will be unprofitable. If you concur, retire tonight toward SAIPAN. Will order out tankers with Task Group 58.4 and direct Task Group 58.4 remain in vicinity of SAIPAN. ZUIKAKU must be sunk if we can reach her. Advise.

3. During the morning of the 20th our search planes made no contact with the enemy. Commander FIFTH Fleet stated that he believed the ZUIKAKU with carrier screen was proceeding to the northwestward. Commander Task Force 58 concurred in this belief, but had search planes in the air, and in order to maintain a given point option had to wait until they landed before course could be changed to the northwest.

4. At 1100 Commander Task Group 58.7 was requested to rotate his bearing 60° to the right, which would put him bearing 330° from Task Group 58.3. At 1200 course was changed to course 330° and at 1330 a search was launched similar to previous searches, except the median was rotated 30° to the right.

5. At 1200 a fighter attack group with belly tanks and bombs was sent out from LEXINGTON on bearing 340° distance 475 miles. This search could only cover about 20°. The bearing for this mission was based on an enemy speed of 15 knots from earlier DF positions, assuming that the enemy was heading directly for the Empire. By 1500 these fighters should have reached their maximum range. There were no reports heard over the search frequency, to which all hands were listening intently. It was realized that we were hoping against hope that the enemy fleet would be so foolish as to remain within striking distance of our carriers after most of their carrier planes had been destroyed. However, there was a faint chance that the enemy ships were escorting their damaged carrier at a slow speed back to the Empire, and that they might feel that they could operate with impunity beyond 500 miles from the MARIANAS.

6. At 1420 Commander Task Force 58 received the following from Commander FIFTH Fleet:

> Would like to continue pursuit of enemy to northwestward tonight if this afternoon's operations give any indications it will be profitable. Please comment with particular reference to the fuel situation.

Remainder of the despatch was administrative.

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Photograph of attack on U.S.S. BUNKER HILL by Jap planes, showing one plane shot down by U.S.S. BUNKER HILL and CABOT antiaircraft fire.

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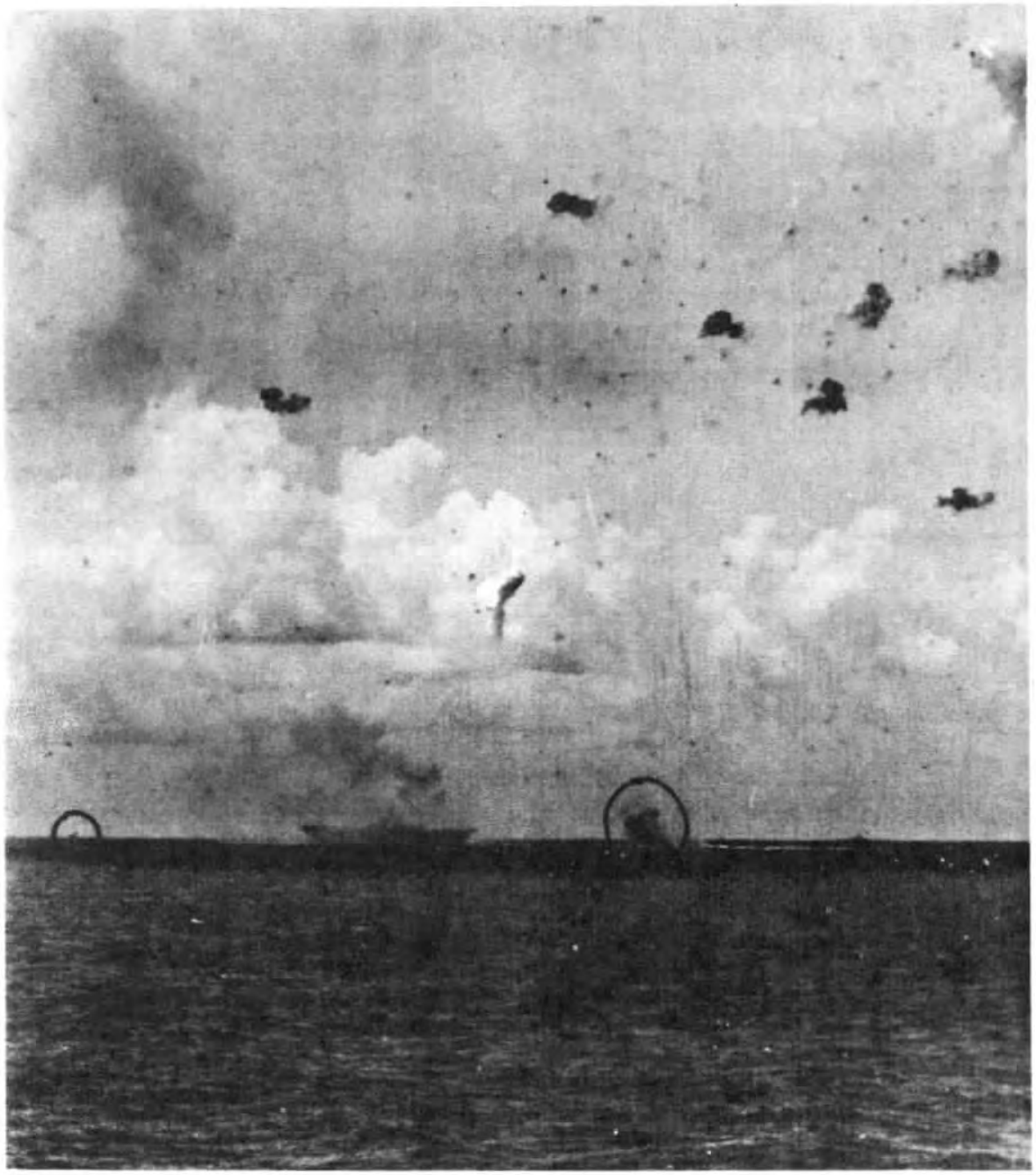

Photograph of Dive-bombing attack on U.S.S. WASP by Jap planes, showing one plane hitting water forward of ship and remains of burning plane aft.

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Battle of Marianas (off Guam)- Jap plane (Judy)
making dive on CV-17 - Time 1400, 19 June 1944

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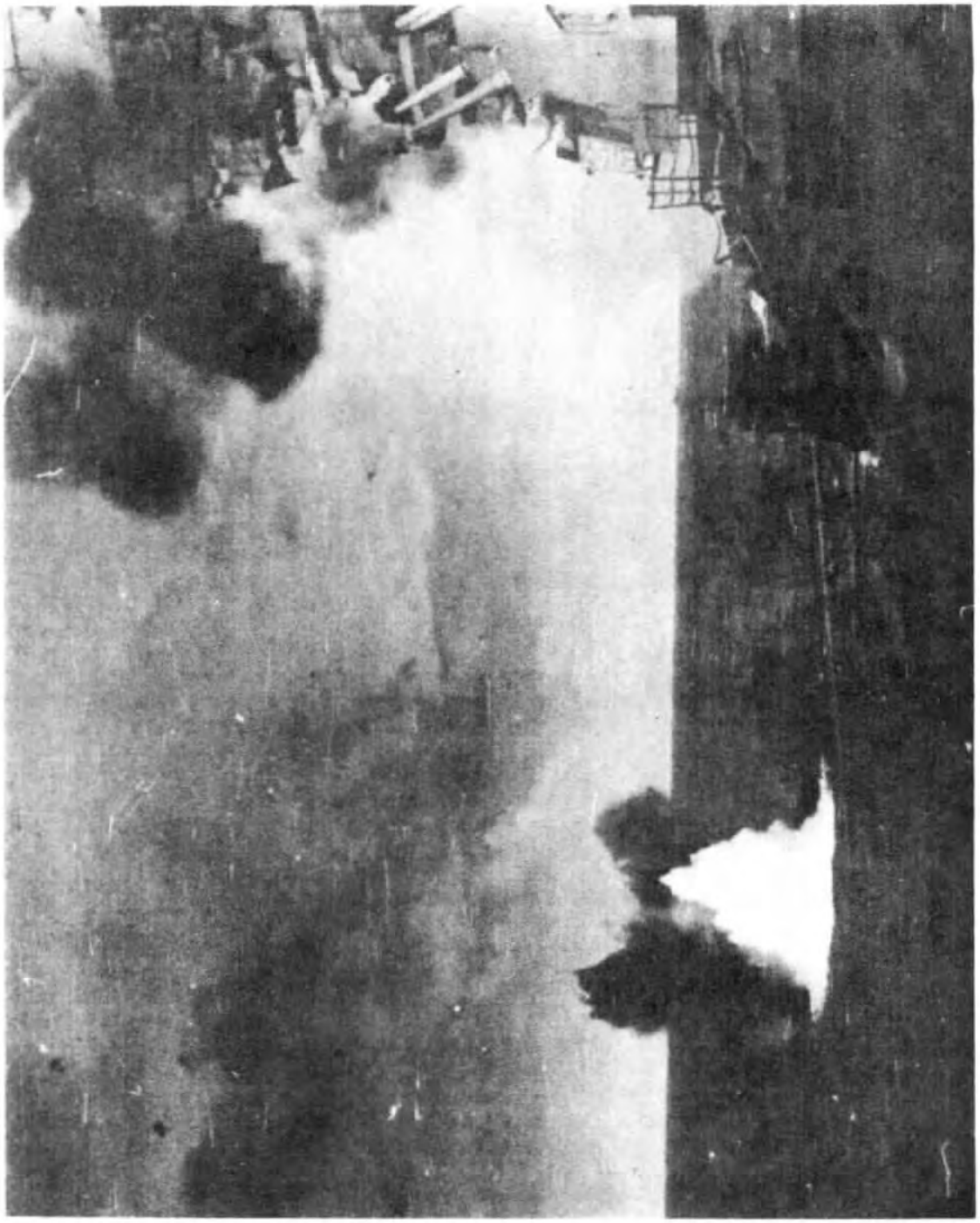

Battle of the Marianas (off Guam) - Bomb splash near CV-17
made by Jap plane (Judy) - Second attack, 19 June 1944

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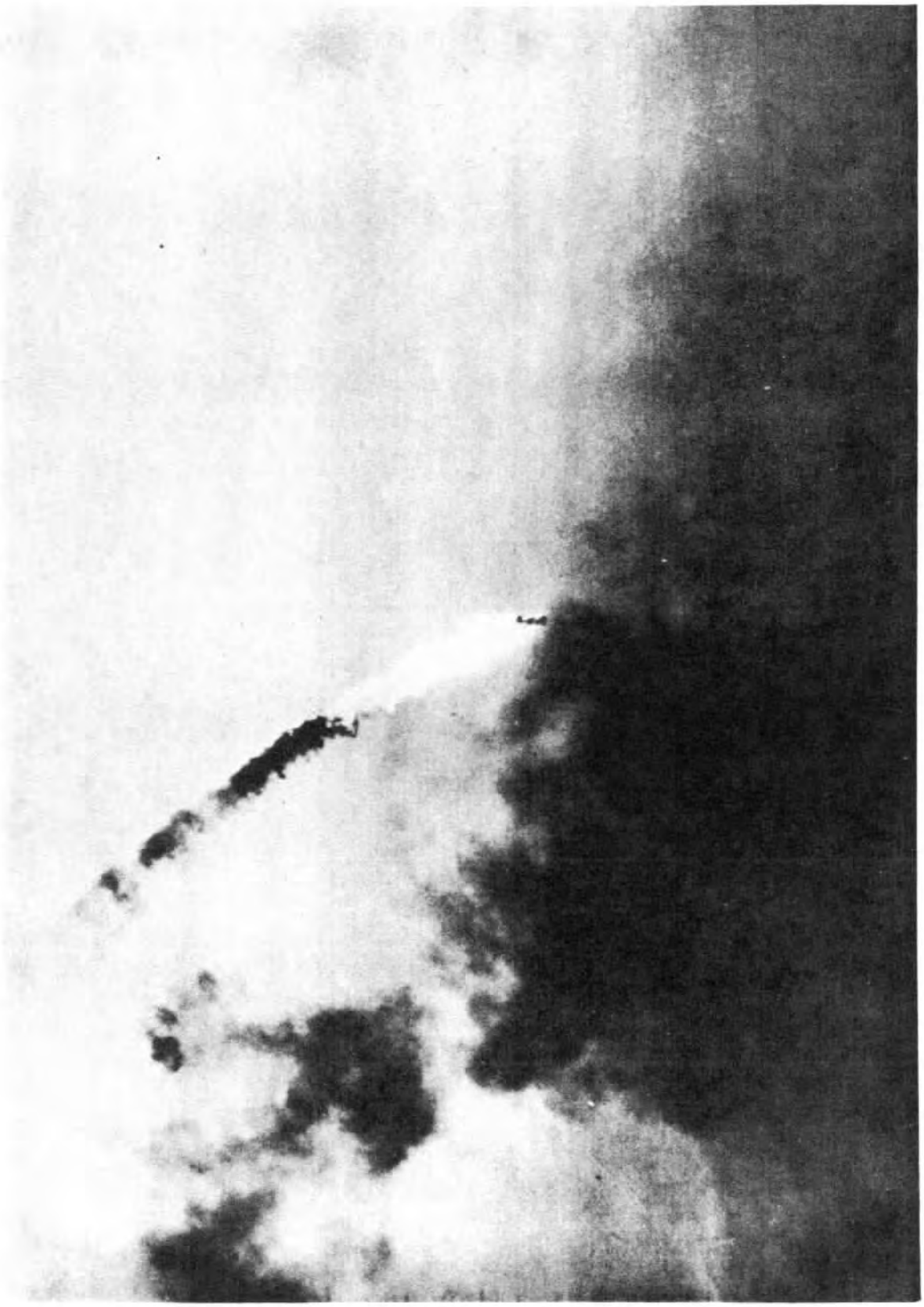

Jap plane hit by our forces.

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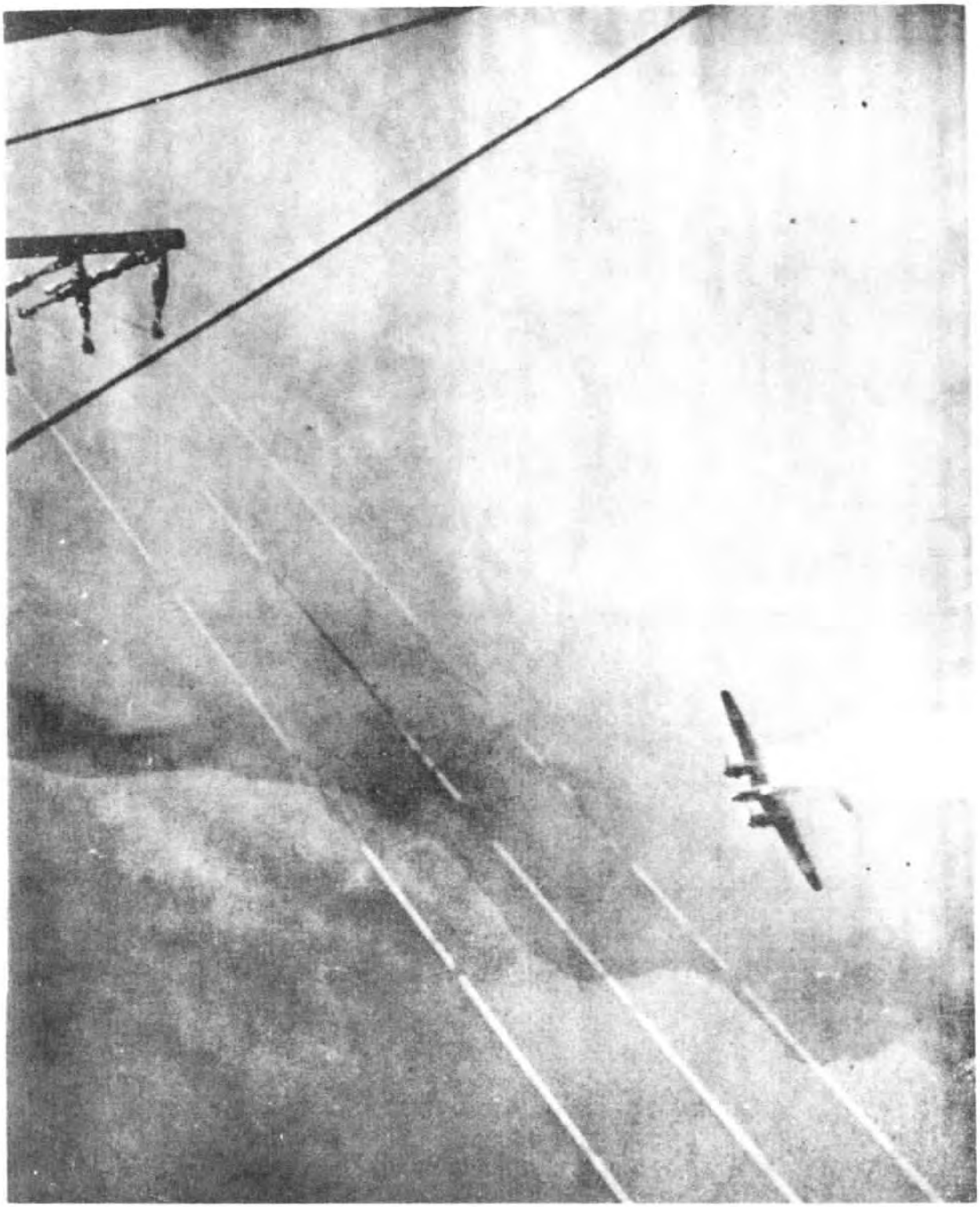

Jap plane hit by our forces.

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7. The following reply was sent:

Some destroyers tomorrow morning will be very low on fuel. Propose to fuel them from large ships as opportunity affords, continuing pursuit of the enemy with remaining ships.

*XII CONTACT REGAINED. DECK-LOAD STRIKE LAUNCHED.*

1. At 1542 on the afternoon of 20 June a garbled report from an unknown plane was heard over the search frequency. It was evident that some plane had sighted something; but where, what or who could not be determined from the first transmission. It was believed that this sighting was made by our fighter bomber mission. It was not until about 15 minutes after the first report that it was definitely determined that one of our regular afternoon search planes had sighted the Japanese fleet in several groups in two or three positions. The search plane reported that the enemy fleet was heading west at slow speed in position Lat. 15° N., Long. 135°-25' E., and at Lat. 14°-55' N., Long. 134°-15' E. Apparently the enemy was fueling. At 1550 the disposition was alerted. At 1553 Commander FIFTH Fleet was informed that the carriers expected to launch everything they had and that we would probably have to recover at night.

2. The decision to launch strikes was based on so damaging and slowing enemy carriers and other ships that our battleline could close during the night and at daylight sink all ships that our battleline could reach. The Japanese were low on ships and it was believed that they would attempt to save their ships. We had a powerful battleline, superior to the total power of the Japanese reported in that area. It was believed that this would be the one last time that the Japanese could be brought to grips and their navy destroyed once and for all. Good fortune had been riding on our side, for otherwise the Japanese would not have been so foolish as to base everything on the belief that we would remain in the near vicinity of SAIPAN.

3. Taking advantage of this opportunity to destroy the Japanese fleet was going to cost us a great deal in planes and pilots because we were launching at the maximum range of our aircraft at such a time that it would be necessary to recover them after dark. This meant that all carriers would be recovering daylight-trained air groups at night, with consequent loss of some pilots who were not familiar with night landings and who would be fatigued at the end of an extremely hazardous and long mission. Night landings after an attack are slow at best. There are always stragglers who have had to fight their way out of the enemy disposition, whose planes are damaged, or who get lost. It was estimated that it would require about four hours to recover planes, during which time the Carrier Task Groups would have to steam upwind or on an easterly course. This course would take us away from the position of the enemy at a high rate. It was realized also that this was a single-shot venture, for planes which were sent out on this late afternoon strike would probably not all be operational for a morning strike. Consequently, Commander FIFTH Fleet was informed that the carriers were firing their bolt.

4. At 1555 the Task Groups were instructed to launch the first deck load and to prepare their second deck load. At 1610 the Task Force was told, based on search plane reports, that there were two and possibly three groups of enemy ships. One northern group was about 15 miles to the north of the center group and consisted of two or three CA's and eight destroyers. A southern group in position previously given had two CV's two AO's and destroyers on course west. A third group consisting of one CV and many ships was 60 miles west of the first reported group. The primary objective was to get the carriers.

5. At 1624 the first strike was launched. At about the time the planes launched, a correction in the position of the first group reported was received which placed them on the same bearing as previously computed but about 60 miles farther away. This was the closest enemy group, and required a strike at 280 miles. It was decided to let the first wave go on, but to hold the second wave until the next morning. This was done because the enemy had been alerted by our search planes and if the enemy were not damaged at once there would be no chance of bringing his fleet into a decisive action.

6. After the launch had been made, Commander FIFTH Fleet was informed:

Expect to continue on present course and speed unless otherwise directed.

7. At 1844 the attack by our planes was delivered on the enemy, in position approximately Lat. 15°-30' N., Long. 133°-55' E.

8. The Task Groups were opened out to 15 miles in order to give maneuvering room for the night recovery of their air groups. At 1912 the following message was sent to Commander FIFTH Fleet, and for information to the Task Group Commanders:

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> After recovery of all planes tonight propose to have Task Groups 58.1, 58.2 and 58.3 take speed 19. Task Group 58.7 speed and distance optional.

It was the Task Force Commander's intention thus to release the battleline from the necessity of maintaining station on the Carrier Task Groups during the period when the latter would be steaming up-wind for a considerable time during plane recoveries, in order that the battleships might proceed independently and endeavor to gain position to commence decisive action at daylight. Commander FIFTH Fleet replied:

> Consider Task Force 58 should be kept tactically concentrated tonight and make best practicable speed toward the enemy so as to keep them in air striking distance.

9. Preparations were made to launch night search and attack units. Some of the destroyers were commencing to get low on fuel and it was questionable whether it would be more advisable to have them fuel from cruisers or to send them back to SAIPAN while they still had sufficient fuel to make it. A decision was made to have one division of destroyers trail each Carrier Task Group to retrieve pilots landing in the water, to make a search of the area in daylight on 21st, and then to retire toward the fueling group. At 2015 the following despatch was sent to Commander FIFTH Fleet:

> Estimate that some undamaged Jap ships will retire tonight at 20 knots. Carriers should remain within 200 miles to strike enemy. Many of the planes launched today are now landing in water. Some destroyers will be out of fuel tomorrow and will require refueling. At what speed do you recommend that we steam tonight.

*XIII THE NIGHT RECOVERY OF PLANES.*

1. At 2045 our returning planes began to orbit overhead; course was changed into the wind and speed to 22 knots, and recoveries commenced at once. Some planes had battle damage, all were low on gas, and pilots fatigued after their long and hazardous mission. A few had difficulty in finding us and the Carrier Task Group Commanders were instructed to turn on one searchlight in each Task Group to assist pilots in homing. Planes landed on whatever carrier deck was available; locating the parent carrier was secondary in importance to making a landing somewhere before the gas ran out.

2. Gas shortage forced some planes to land in the water. There were the deck crashes to be expected with tired, daylight-trained pilots who in many cases were making their final approach on the carrier before running out of gas. Destroyers did a splendid job of recovering pilots and crewmen from the water, and were kept busy. Indeed, the entire attention of the Carrier Task Groups was devoted to the night landings until about 2300, by which time they, and Task Group 58.7 with them, had moved considerably eastward into the wind.

3. Commander FIFTH Fleet was requested to inform the Dumbos of our position so that pilots not recovered could be retrieved by them.

4. At 2228 the following message was sent to Commander FIFTH Fleet:

> Enemy fleet in four groups in approximate position at 1900 Lat. 15°-30'N., Long. 133°-05' E., apparently on course west. After recovery tonight expect to come to course 315° until we arrive at our 2045 position and then come to course approximately 280° in order to recover our downed pilots. Believe all enemy carriers and many other ships damaged and in confusion. Our carriers should proceed at 16 knots in order to retrieve as many pilots as possible.

At higher speeds the destroyers, all of which were recovering pilots, could not rejoin and reform a screen on the Carrier Task Groups.

5. At 0450 Commander FIFTH Fleet was informed as follows:

> With wind to easterly, it will not be possible to close enemy at option speed greater than 15 knots. Enemy appears to be escaping northwest with idea of fueling. Some damage done. Yesterday, anti-aircraft fire extremely heavy and accurate. Many planes damaged. We hope to find a few crippled ships today.

6. During the night a PBM search plane reported the enemy heading generally northwestward at varying speeds. At 0200 Task Force 58 launched search TBF's equipped with long-range belly tanks to shadow the enemy. This search between 0522 and 0700, 21 June, reported four groups of enemy ships between Lat. 17° and 18° N., and Long. 131° and 132° E., on northwesterly course. The composition of the force was reported as three CVL's, four battleships, twelve cruisers, and sixteen destroyers. The night strikes had been cancelled because we would not be within air strike range of the enemy. The Task Groups were requested to launch deck loads as soon as practicable after dawn. Fighters were permitted to carry 500 lb. bombs. Primary targets

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were cripples; secondary targets on the first launch were healthy targets in vicinity of cripples. The second strike would be launched when it could be organized and against targets to be designated later. At 0357 point option was given as course 280 speed 15 (the maximum that could be made down wind) and the carriers were to brief all pilots to return to base when the limit of their outward leg had been reached rather than to continue on and run out of gas.

*XIV DISTANCE DENIES FURTHER OPPORTUNITY TO DAMAGE THE ENEMY.*

1. At 0800 on 21 June, Commander Task Force 58 informed Commander FIFTH Fleet:

> Report of special scouts equipped with special fuel tanks and without bomb load reports enemy headed northwest, speed 20 knots, distance 360 miles. Maximum range of plane with bomb load is 250 miles. Strike now in air ordered to hit cripples within range. If they go farther many of them will again make water landings. Air strikes cannot reach target at present range.

2. When the strike mentioned above was found to be unable to reach any targets, plans for sending the battleline plus Task Group 58.2 (except CVL's) in pursuit were recalled and the entire Task Force refueled destroyers.

3. The enemy had escaped. He had been badly hurt by one aggressive carrier air strike at the one time he was within range. His fleet was not sunk.

## LESSONS LEARNED, RECOMMENDATIONS, AND CONCLUSIONS

### AIR OPERATIONS BY MODIFIED METHOD "A"

*CTG 58.1 comments and recommends:*

1. This Task Group has used a modified method "A" for air operations of one or two carriers when conditions did not require the use of method "A" as specified by USF 10A, and yet method "B" was not satisfactory for one of the following reasons:

(1) Number of planes to be launched or recovered too great.
(2) Very light wind, requiring high speed of the operating carrier.
(3) Desirable to keep the operating carrier within the screen.

2. The operating carrier(s) proceeds to the down-wind side of the formation, building up the necessary speed for the required wind velocity across the deck when headed into the wind. The operating carrier(s) turns into the wind to conduct flight operations and at the proper time the entire formation is turned into the wind. Thus the relative speed of the operating carrier(s) over formation speed is only the amount she has had to increase her speed to get sufficient wind over the deck. At times it will be necessary to increase the formation speed slightly to prevent the operating carrier going outside the screen, particularly when operations are long or winds very light.

3. The distance lost along the base course is much less than that lost by using method "A". As the relative speed between the operating carrier(s) and formation is never very great, the time available for flight operations without going beyond the screen is greatly increased over method "B".

4. Fuel saving in the ships that need it most is perhaps the outstanding advantage, as only the operating carrier(s) increases speed.

5. It is not intended that this method of operation should replace either method "A" or method "B" as now described in USF 10A, but it is felt that this modified method "A", as described above, has a definite place under certain conditions and should be incorporated in USF 10A.

### AIR SPOT

*CTG 53.2 comments and recommends:*

*Air Spot with Shore Fire Control Parties* - This procedure worked very well where planes could come up on the shore fire control frequency. By such employment, an added safety factor was introduced into plane spot fires.

Intensive training between spotting planes and shore fire control parties is recommended to increase the use of such teams to a maximum efficiency.

*CTF 51 comments:*

Ship's planes were constantly available for observation of ship's gunfire. Cruisers and Battleships employed their own planes to great advantage when firing special deep support missions. Planes

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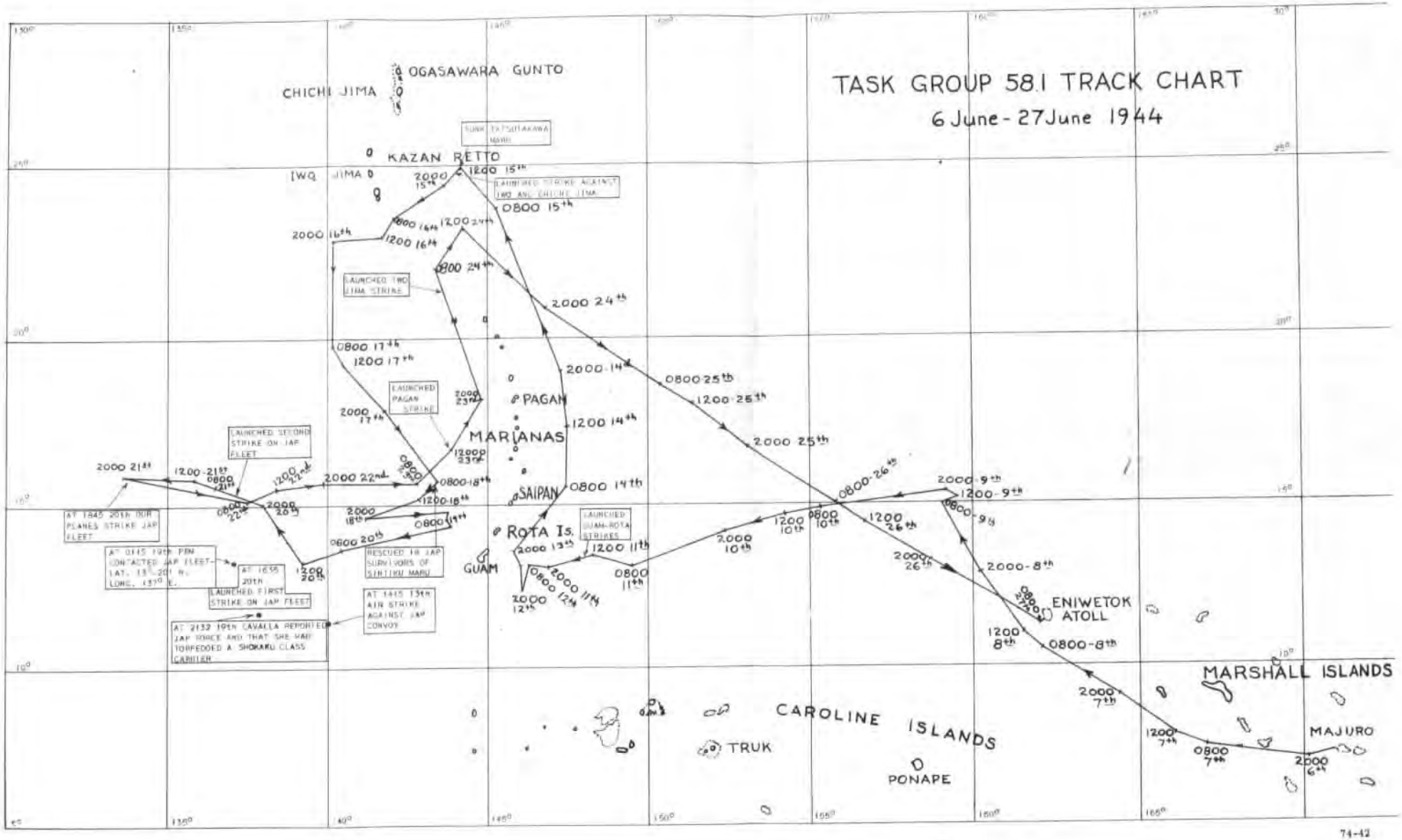


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were similarly assigned to destroyers for the same purpose.

Shore fire control parties did not make use of planes for supplementing their own observation. It is felt that Air Spot would have greatly aided spotters, particularly during the first few days when commanding terrain had not been secured.

Shipboard-based air spot for shore artillery was also available, but was not requested, as artillery OY planes were able to operate from the CHARAN-KANOA Air Strip almost as soon as the artillery was established ashore.

## AMMUNITION
(Also see Ordnance Material)

*ALLOWANCE*

*CTF 53 comments:*

The supply of ammunition became critical on about William plus 5 Day. A request was made to CTF 51 for an ammunition ship and CAPE TRINITY with various categories arrived on 30 July.

Prior to the arrival of the ammunition ship it became necessary to strip destroyers leaving for ENIWETOK or PEARL of all 5"/38 AA Common and starshells except 10 percent of normal allowance, as well as all starshells and 50 percent of 5"/38 AA Common carried on transports.

A considerable amount of 8", 6" and 5"/38 AA Common, as well as ammunition for close-range weapons, was carried in the assault shipping. This supply was invaluable and was tapped first on William plus One Day.

The supply of starshells became especially critical after the troop commanders became accustomed to their use. Thereafter they desired much starshell illumination. However, after an explanation of the starshell shortage, their requests became reasonable and the supply on hand was made to last. It is important that preparations be made to use starshells liberally on the night following the landing.

*EXPENDITURE and RESUPPLY*

*CTU 53.5.3 comments and recommends:*

During this operation, heavy ships and destroyers were required to replenish ammunition frequently. Heavy ships kept LCI's supplied with 40MM and 20MM. Circumstances required a great deal more time to be spent in these activities than should be necessary. Because of sea conditions and the fact that ammunition ship (CAPE TRINITY) had pontoon clips projecting from her side and no fenders, it was dangerous for heavy ships or destroyers to load alongside. Though an LCT was available part of the time, the severe shortage of small craft made it necessary on several occasions for ships to use whaleboats for this purpose - an obviously slow and cumbersome procedure. Part of the time an LST was made available for taking ammunition from ships leaving area and distributing to remaining fire support ships. This was satisfactory except that the LST was not equipped to handle ammunition and personnel were not trained in handling and stowing this type of cargo. WICHITA's suggestion that covered lighters or LST's, with ammunition of all types, be made available in fire support areas, together with suitable craft in which to discharge empties, is heartily concurred in. LCI's could also, of course, get their ammunition from this source. A qualified ammunition officer should be detailed to insure proper handling and observance of safety precautions. One result of improper handling was the numerous crimped 5-inch cartridge cases reported by ships. It is believed that present methods of handling ammunition in operating and forward areas must be improved.

*CTG 53.2 comments and recommends:*

Ammunition resupply was turned over to CTG 53.2 on William day and actual resupply of destroyers commenced on William plus one day and continued thereafter. Available resupply was definitely critical on William plus six and ammunition on transports and destroyers being released to return to the eastward was transferred to firing ships remaining. Ammunition reports as of 1200 daily were submitted by all fire support ships to CTG 53.2 and resupply was made by LST or LCT to the ships, generally accomplished during daylight in the support areas. Starshell shortages and shortage of available LCT's were the main difficulties as the troops desired as much night illumination as was possible and the LCT's were urgently required for discharging transports. Alleviation of resupply difficulties was evident upon arrival of the CAPE TRINITY just prior to release of gunfire control by CTG 53.2. By William plus five, destroyers in the Southern Area had been resupplied by LST reserve, 5600 rounds 5 inch 38, and cruisers 2700 rounds 6 inch 47 and 1350 rounds 8 inch 55. Requirements for ammunition as of noon William plus six to fill up the ships operating under CTG 53.2 were as follows:

| | | |
|---|---|---|
| 5"-25 | 2241 | AAC |
| | 1050 | Stars |
| 5"-38 | 4304 | AAC |
| | 1541 | Stars |
| | 39 | WP |
| | 54 | Common |
| | 250 | Special |
| | 300 | Special powder |
| 6"-47 | 2100 | |
| 8"-55 | 921 | |
| 14"-45 | 945 | |

Disregarding ammunition expended by the CALIFORNIA, IDAHO, COLORADO, and NEW MEXICO on OROTE PENINSULA during William day, and adding ammunition resupplied to ships and ships replaced from William day to William plus six, the following expenditures in support of the landing made under CTG 53.2 can be considered as comparatively accurate:

| | | |
|---|---|---|
| 5"-25 | 3,000 | rounds |
| 5"-38 | 13,600 | " |
| 6"-47 | 4,800 | " |
| 8"-55 | 3,150 | " |
| 14"-45 | 945 | " |
| | 25,495 | Total rounds fired in six days. (This figure is not maximum but rather tends to be the minimum). |

It is recommended that one LST with at least one LCT be made available for transportation and resupply of ammunition in order to permit LST's involved in discharging to continue without interruption for resupply of fire support ships; LST to have sufficient crawler cranes or equivalent to expeditiously handle ammunition.

*CTF 51 comments:*

Shortly after D-day, it became apparent that certain types of ammunition, particularly 6 inch HC, 5 inch AAC, and Stars would shortly be exhausted. Neither time nor the number of ships available permitted keeping up with expenditures by sending ships to ENIWETOK. It was noted that the USS MAZAMA was heavily loaded with the types most in demand so her movement to SAIPAN was requested, thereby easing a very critical situation. Thereafter ammunition ships were ordered to the forward area as needed. Ships which did return to ENIWETOK were supplied there. These ships consisted primarily of Carriers, Battleships, and Destroyers assigned to escort duties.

Ships departing for rear areas were ordered to discharge all 5 inch AAC in excess of 60 rounds per gun and all stars in excess of 10 rounds per gun to fire support ships remaining. Excess ammunition was removed from all types of craft stopping at SAIPAN.

Rebombing of carriers presented an unusual problem, as this was ordinarily done on short notice using whatever types and quantities of bombs were on hand. On one occasion, every ship in the roadstead (including AVs and AVPs) was stripped of bombs for the carriers of TF 58. Emergency shipments ordered from ENIWETOK by ComFIFTHFleet enabled carriers to remain effective, although the bombs supplied were not always those desired.

Replenishment at the objective reached unexpected magnitude and transfers were constantly being made after D-day. At SAIPAN - TINIAN the following number of replenishments were made from ammunition supply ships (including assault APAs, AKAs and LSTs)

| | |
|---|---|
| OBB | 5 |
| CA | 22 |
| CL | 35 |
| DD | 112 |
| CV | 5 |
| CVL | 4 |
| CVE | 12 |

Plus miscellaneous craft.
Plus numerous transfers from fire support ships leaving the area to ships remaining.

AS WE PUSH FURTHER WESTWARD THE LONGER LINES OF COMMUNICATIONS MAKE IT NECESSARY THAT CARE SHOULD BE TAKEN TO MAKE EVERY SHOT COUNT. IMPRESSIVE LARGE FIGURES OF AMMUNITION EXPENDITURES DO NOT ALWAYS MEAN THE SAME DEGREE OF DESTRUCTION IN ADDITION TO THE WEAR AND TEAR ON THE GUNS. INDIVIDUAL SHIPS SHOULD MAKE EVERY EFFORT TO ELIMINATE WILD SHOTS, CARELESS SHOTS AND OBVIOUSLY INEFFECTIVE SHOTS.

A similar program was followed at GUAM.

The table below shows the total ammunition transferred at the objective from ammunition ships or cargo ships, including assault ships:

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| TYPE | SAIPAN - TINIAN | | | | GUAM | | | | Grand Total Rnds. | Grand Total Tons |
|---|---|---|---|---|---|---|---|---|---|---|
| | Initial Assault Ships | AEs Cargo & Misc. | Total Rds. | Total Tons | Initial Assault Ships | AEs Cargo & Misc. | Total Rds. | Total Tons | | |
| 16"HC | | 886 | 886 | 1051 | | | | | 886 | 1051 |
| 14"HC | | 2446 | 2446 | 1949 | | | | | 2446 | 1949 |
| 14"AP | | 36 | 36 | 40 | | | | | 36 | 40 |
| 8"HC | 1800 | 6460 | 8260 | 1424 | 3600 | 1274 | 4874 | 829 | 13134 | 2253 |
| 8"AP | | *20 | 20 | 3 | | | | | 20 | 3 |
| 6"HC | 6480 | 9598 | 16078 | 1246 | 5400 | 2300 | 7700 | 597 | 23778 | 1843 |
| 6"AP | | 2900 | 2900 | 141 | | | | | 2900 | 141 |
| 5/38AAC | 12000 | 56350 | 68350 | 3451 | 12000 | 21901 | 33901 | 1712 | 102251 | 5163 |
| 5/38Star | | 8070 | 8070 | 408 | | 4279 | 4279 | 216 | 12349 | 624 |
| 5/38Com | | 1595 | 1595 | 80 | | | | | 1595 | 80 |
| 5/38 WP | | | 1541 | 78 | | | | | 1541 | 78 |
| 5/51 HC | | 2900 | 2900 | 141 | | | | | 2900 | 141 |
| 5/25AAC | | 11922 | 11922 | 588 | | 2856 | 2856 | 140 | 14778 | 728 |
| 5/25Star | | 1871 | 1871 | 95 | | 1052 | 1052 | 53 | 2923 | 148 |
| 4.5 BR | 2700 | 11374 | 14074 | 282 | 2700 | 4000 | 6700 | 134 | 20774 | 416 |
| Rockets | | | | 10948 | | | | 3681 | | 14629 |
| 2000#GP | | 55 | 55 | 55 | | | | | 55 | 55 |
| 1000#GP | | 717 | 717 | 359 | | | | | 717 | 359 |
| 1000#SAP | | 360 | 360 | 180 | | | | | 360 | 180 |
| 1000#AP | | 29 | 29 | 15 | | | | | 29 | 15 |
| 500#GP | | 3975 | 3975 | 994 | | | | | 3975 | 994 |
| 350#DB | | 1374 | 1374 | 240 | | | | | 1374 | 240 |
| 250#GP | | 900 | 900 | 113 | | | | | 900 | 113 |
| 100#GP | | 3284 | 3284 | 164 | | | | | 3284 | 164 |
| 100#Inc.CL | | 400 | 400 | 20 | | | | | 400 | 20 |
| 100#Frag.CL | | 565 | 565 | 29 | | 250 | 250 | 1 | 815 | 30 |
| A/C Rockets | | 1400 | 1400 | 28 | | | | | 1400 | 28 |
| 50 Cal. | | 1650000 | 1650000 | 289 | | | | | 1650000 | 289 |
| | | | | 2522 | | | | 1 | | 2523 |

The following administrative problems incidental to the replenishment program were encountered:

(a) Disposal of empties - Solved by loading into discharged LSTs, AKs, merchant ships, partially unloaded AEs, and temporarily into harbor craft.

(b) Permanent working parties - Obtained from Headquarters ships and transports.

(c) Supervision of inexperienced merchant ships carrying ammunition - Assignment of staff officers to temporary duty aboard such ships.

(d) Shortage of equipment (fenders, camels, lines, etc) - Borrowed from other craft.

The extent of the demand for starshells was unanticipated and the available supply at SAIPAN was almost completely consumed by the time hostilities ceased. 6820 illuminating projectiles were expended in 25 days of combat at SAIPAN (an average of 280 per night) and more could have been used at times to advantage. At least 300 stars per day of expected combat should be provided in future assaults of similar character and magnitude.

Following is a tabulated summary of ammunition expended at SAIPAN and total reserves made available at ENIWETOK. (ENIWETOK reserves include ammunition later shipped to objectives in AEs and Cargo Ships).

Ammunition Summary

| | Total in OBB, CA, CL, DD | Total Reserve Assault Shipping (TF52&53) | Reserve Requested at Eniwetok (TF52&53) | Reserve Provided at Eniwetok (TF52&53) | Total Reserves | Used Saipan Campaign | Tons Used Saipan | Used GUAM and TINIAN | **Average Call Fires Per Day 28 June to 2 July (Saipan) |
|---|---|---|---|---|---|---|---|---|---|
| 16"HC | 1336 | | 2560 | 2700 | 2700 | 3768* | 3674 | Will be included in Reports of CTF 52 and CTF 53 | |
| 16"AP | 748 | | 1280 | 500 | 500 | 50 | 56 | | |
| 14"HC | 4800 | | 6000 | 6880 | 6880 | 2610 | 1958 | | |
| 14"AP | 1800 | | 3000 | 1800 | 1800 | 77 | 58 | | |
| 8"HC | 5400 | | 5400 | 8500 | 13900 | 4670 | 607 | | 100 |
| 8"AP | 2430 | | 2700 | 5500 | 5500 | 150 | 20 | | 15 |
| 6"HC | 11800 | 11800 | 11800 | 25500 | 37380 | 14600 | 790 | | 700 |
| 6"AP | 5130 | | 5940 | 13000 | 13000 | 825 | 54 | | 75 |
| 5/51 HC | 3400 | | 2600 | 6000 | 6000 | 3000 | 75 | | |
| 5/38AAC | 109190 | 24000 | 53400 | 145000 | 169000 | 114844* | 3101 | | 35000 |
| 5/38Star | 10400 | | 4740 | 6500 | 6500 | 5520 | 149 | | 230 |
| 5/38Com | 10000 | | 8000 | 16000 | 16000 | 2205 | 65 | | |
| 5/38WP | 1400 | | 3160 | 2400 | 2400 | 1722 | 47 | | |
| 5/25AAC | 23760 | | 13200 | 24000 | 24000 | 11000 | 278 | | 250 |
| 5/24Star | 6000 | | 1440 | 3100 | 3100 | 1300 | 33 | | 20 |

Total 10,965 Tons

* Includes 2432 16"HC and 12544 AAC, fired by TF 58, which are not included in figures in Column 2.
**28 June - 2 July is a representative period because all Fire Support CAs, CLs and DDs of TF 52 were present and were available for fire support missions.

*CTF 51 Continues:*

It is recommended that plans be made for supplying the maximum amount of reserve ammunition at the objective in assault ships and one or two AE's at a time. These AE's should be experienced, stowed for rapid discharge, equipped with the fastest handling gear available, carry camels and plenty of fenders, and have stevedore crews attached while in combat areas.

*EXPENDITURE CONTROL*

*CTU 53.5.3 comments and recommends:*

The large amount of ammunition expended during this operation appears to have been justified by the results obtained. However, in view of the difficulties in replenishing high capacity ammunition (its relative scarcity, and the problems of transportation and loading) and the desirability of holding E.S.R. of main batteries to a minimum consistent with accomplishment of mission, main batteries should be reserved for destruction of specific important targets and 5-inch batteries used generally for harassing and neutralization. Of course there will be cases when all batteries will be required to neutralize a given area, but in most situations 5-inch should suffice.

*CTF 53 comments:*

Ammunition allowances, as prescribed by the Commander Amphibious Forces, Pacific Fleet, were employed. A certain number of rounds were set aside for Pre-William day, William Day and subsequent to William day. It became necessary later to adjust these allowances when a long delay in William Day permitted an extended period of softening-up.

The schedules of fires were on broad general lines, with details left to the initiative of the fire support unit and ship commanders.

*PERFORMANCE (also see Ordnance Material)*

*CTF 51 comments:*

Ammunition performed well. The very low percentage of duds and failures among illuminating projectiles was a source of surprise and gratification to all. The heat-treating process appears to be very effective.

White phosphorus projectiles were not very successful as incendiary agents. Easily ignited material (such as dry cane fields) were successfully burned, but brush could not be ignited except when

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extremely dry. The napalm-gasoline bomb is considered to be much superior to the White Phosphorus projectile as an incendiary agent.

*CTF 58 comments and recommends:*

40 MM and 20 MM have functioned satisfactorily A number of complaints have been received about the poor performance of the 5" 38 cal. MK. 32 fuzed ammunition. About 1,000 rounds of MK. 32 were re-energized for each CV prior to this operation, but subsequent tests indicated little improvement, and in some cases a decrease in the number of normals was recorded. It is urgently recommended that very positive steps be taken to investigate the reasons for this poor performance (apparently *not* due to battery deterioration), and to expedite the shipments to the fleet of the new improved MK. 32 with permanent energizers.

WASP and BUNKER HILL both gave credit to the MK. 32 for effectively shooting down the dive bombers from the Japanese carriers, but it is felt that earlier destruction would have resulted from better functioning of the fuze.

*PROJECTILES*

*CTF 51 recommends:*

1. That high capacity projectiles have a base fuze with greater delay (.010 to .005 seconds).

2. That the majority of high capacity projectiles be fitted with steel nose plugs. That the point detonating fuze be used only:

(a) For general bombardment of areas containing buildings, hangars, barracks, trenches, personnel, etc.

(b) To remove camouflage from gun positions and beach defenses.

3. That armor-piercing and common projectiles be reserved for point blank fire at the most rugged and massive types of structures not penetrable by high capacity projectiles.

*STARSHELLS*

*CTU 53.5.3 comments and recommends:*

Some ships reported illuminating projectile failures as high as 75%. Non-heat-treated projectiles should be exchanged at the earliest opportunity. In this connection, two ships have reported that ammunition depots refused to make the exchange.

CALIFORNIA Gunnery Officer states that a shore fire control party informed him that safety lines did not apply when firing stars. The fact remains, however, that falling cases from illuminating projectiles constitute a real hazard to our troops. Information on trajectory of starshell case would be valuable.

*CTG 53.2 recommends:*

That increased allowances be made available for future operations and that a more efficient starshell be developed by the Bureau of Ordnance, as SAN FRANCISCO reported 90% duds and the average for all ships was at least 15%.

That experimentation in the use of illuminating flares by plane at night be conducted.

*CTF 53 recommends:*

That starshell allowance for night call fires be greatly augmented. Troops called for stars continuously once their value was discovered. Night starshell illumination was of great value in preventing enemy night counterattacks and infiltration.

*CTF 51 comments and recommends:*

Illumination by means of starshells was of unanticipated value, due to the many caves in which the Japanese could hide until darkness and then infiltrate among our troops. Future ammunition allowances should include an increased percentage of starshells in view of their great assistance to the troops ashore. Incidentally, illumination was used to a considerable extent during the "mopping up" period after SAIPAN had been secured.

Much illumination was delivered unnecessarily. Several Shore Fire Control Parties adopted the practice of adjusting illumination over the desired area, instructing the ship to maintain illumination until further notice, and then checking out of the communications net until morning. The physical strain on the Shore Fire Control Parties of maintaining position in a rapid advance, and the lack of rest in combat, is understandable, but it is certain that this practice resulted in delivery of needless illumination. In the late stages of the operation, the shortage of starshells was critical and might have been avoided through a more cautious program of earlier expenditures.

Many complaints were received of empty starshell projectiles falling within our own lines. Lines of Fire for starshells must be just as care-

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fully controlled as in the case of explosive projectiles.

It is recommended that fire support ships be loaded with 50 illuminating rounds per gun and that sufficient reserves be provided to allow an average expenditure of 150 stars per assault division per day of expected combat.

*WHITE PHOSPHOROUS*

*CTU 53.5.3 comments and concludes:*

All hands seem agreed on the effectiveness of white phosphorous projectiles for laying smoke screens, and on the desirability of an increased allowance of these projectiles for destroyers engaged in amphibious operations. Screens laid in support of Underwater Demolition Teams were very effective. White phosphorous is particularly useful for this purpose because of its anti-personnel effect. Although complete ballistic data on these projectiles is apparently not yet available, screens were accurately laid and controlled. The effectiveness of W.P. in spotting 5-inch salvos in wooded and hilly areas was noted by several ships. It is believed that more of these projectiles could be used advantageously by heavy ships engaged in support of troops ashore, as well as by destroyers.

## ANTI-SUBMARINE NET

*CTF 51 comments and concludes:*

The KEOKUK was loaded at TIBURON with 10,000 feet of the new LISP-2 anti-submarine net, completely made up and placed on board with buoys and anchors attached. On 28 June this net was successfully laid at SAIPAN in three hours and thirty five minutes, though it required another twenty five hours for small boats to cut the brails. However, if brails are cut as the net is stowed on board, no extra time will be lost. The only difficulty found in operation was that occasionally a section would drag, indicating that heavier moorings should be used. On 12 August the net was standing up well. It can be stated, therefore, that this net, with the method of laying the made-up net, is an unqualified success and much additional net will be requested for future operations.

## BOMBARDMENT
(Also see AMMUNITION, NAVAL GUNFIRE, PLANE STRIKES, INCENDIARY BOMBS, and RANGES)

*CTU 58.7.3 concludes:*

It is considered that the bombardment was highly effective since (a) the minesweeping group was able to conduct operations as planned with no enemy opposition, (b) bombardment unit was not fired upon by enemy, (c) partial damage to enemy guns and ammunition dumps is indicated from meager information available.

*CTG 53.5 comments and recommends:*

The postponement of William day by slightly over a month had two directly opposite results; it gave the enemy more time to get ready for us, and it gave us more time to soften him up for our assault troops. We had tipped off our hand with the two-hour bombardment on the morning of 16 June. Nothing short of an engraved diagram could have told the enemy more clearly that our photographic reconnaissance had been good, that we had pinpointed the locations of his principal batteries and installations, and that our probable intentions were to land just about where we did. It was perfectly evident that something must be done to keep the enemy constantly alerted and on the move, to prevent him from changing the position of his battery installations if possible, to prevent him from increasing his defenses in the vicinity of our chosen beach landings, to prevent him from planting additional underwater obstacles and mines in these beach areas, and to soften him up and wear him down preparatory to the landings of our assault troops.

The delay, in spite of this prior notification, worked more to our advantage than to that of the enemy. Our constant air strikes were softening him up all the time; and these, coordinated with the gunfire of our bombardment group, were spread over more than twelve days. This naval gunfire was deliberate and carefully controlled. The ships first neutralized and finally knocked out practically all of the enemy antiaircraft batteries, thus increasing immeasurably the effectiveness of our air strikes. As the tempo of our bombardment increased during the last three days, practically all enemy artillery (both coastal defense and dual purpose) was knocked out, enabling our aviators to step up their dive bombing and strafing attacks to a furious intensity from low levels with almost negligible ground opposition.

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The naval bombardment and the air strikes were beautifully coordinated by Commander Task Force 53 throughout this preparatory period. Having plenty of time to do a real job, our photographic reconnaissance had an opportunity to show its stuff. When the photographs showed that some enemy guns in a certain emplacement had not been knocked out, our ships could tackle them the next day and put them out with a minimum expenditure of ammunition. Photographs taken after our occupation of the island clearly show the splended results obtained by our accurate naval gunfire and precision low-level bombing. These results were probably impossible of accomplishment in a two-day bombardment as originally contemplated. Enemy guns which were not destroyed were neutralized and not a single piece of artillery was brought to bear on our transports. During the assault phase, naval gunfire of all calibres pounded enemy objectives unceasingly and swept the landing beaches continuously, interrupted only by our perfectly-timed air strikes. As a result, our attack troops met negligible opposition during the landing operation and suffered surprisingly small losses.

*Recommendation:* That the maximum allowable time be allotted for the preparatory bombardment-bombing phase. That the naval gunfire and air bombing be coordinated to the highest degree possible to the end that each may benefit to the fullest extent from the damage inflicted by the other. In future amphibious operations of this nature, where enemy air opposition has been reduced to a negligible factor, I recommend a seven to ten-day preliminary bombardment period rather than attempting to do in two days what we may accomplish much more thoroughly in a week's time.

*CTF 51 comments:*

Much concern had been felt as to the numerous coast defense guns which photographs had revealed at strategic points around the Island. The heavy caliber bombardment on Dog minus 2 and Dog minus 1 and the air strikes effectively silenced those installations, and shore batteries caused only slight annoyance thereafter, except for one (?) battery at the Northern tip of TINIAN which was not completely silenced until shortly before SAIPAN was secured.

It is recommended that special efforts be made to strip camouflage, natural and artificial, from enemy batteries. This may be done by large caliber HC with P.D. fuzes and possibly by napalm bombs, laid in likely sites.

BOMBARDMENT - TINIAN

*CTF 51 comments and recommends:*

Commencing on Dog plus 11 (26 June 1944), a program was instituted for "softening" the defense of TINIAN. This program was coordinated with Support Air and with shore-based artillery. The general plan provided for dividing the island into a north and a south half. Air and naval gunfire alternated daily, working first in one half and then the other. A target map was maintained, information exchanged, and new targets posted as previously described. It was the intention to level all inhabited areas and destroy all known defenses. The BIRMINGHAM, MONTPELIER, and INDIANAPOLIS were given these assignments and directed to use both air and direct spot. All three ships were extremely conscientious in carrying out their tasks and developed many additional targets through their own observation.

Results were not as complete as desired due to several factors:

(a) The fact that most defenses were dug in and impossible to destroy without securing direct hits, which, in turn, required an exorbitant ammunition expenditure.

(b) The fact that cruiser guns (and naval bombardment in general) are ideally suited for area bombardment and anti-personnel work. Dispersion, gun wear, and limited ammunition supply operate to their disadvantage against point targets.

It is recommended that ships' batteries be employed to knock out point targets of only the most important and menacing character. Otherwise enormous ammunition expenditures are incurred.

CALL FIRES

*CTG 53.2 comments and concludes:*

*Night Call Fires* - A tentative night support plan was issued every afternoon by CTG 53.2 after William plus one day and afterwards confirmed after awaiting any late requests for changes. This plan was effective upon retirement of transports in the evening and was mainly for delivery of stars and harassing fires. Ships were assigned to shore fire control parties in accordance with the tactical situation. As CTG 53.2 remained in control at all times, coordination between units was achieved through that station. Difficulties arose in the number of stars available and it was necessary to parcel out allowances meagerly. Otherwise, night fires were generally very successful in accomplishing their purpose.

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*CTF 53 comments:*

All assault battalions of the Division and Brigade were assigned fire support ships. Each assault regiment was provided a specially qualified naval gunfire liaison officer with the Army SCR 694 radio equipment so as to increase the efficiency of contact between the headquarters ships and the regimental commanders.

Night call fires were coordinated by Third Marine Division Gunfire Officer. He assigned targets for night deep support and harassing fire to be executed on his order from time to time throughout the night. Fire support ships assigned to individual shore fire control parties remained on their individual shore fire control frequencies to answer calls for night close support missions. Requests from shore fire control parties were given priority over deep support requests from Division Headquarters.

*CTF 51 comments and recommends:*

Call fire assignments and communications in general functioned excellently. The communications involved can best be illustrated by the following figures:

| | |
|---|---|
| Total NLOs on Control Net | 40 |
| Total Fire Support Ships Used | 66 (Not including TF 58) |
| Total No. of SFC parties in Action | 27 |
| Total number of assignments made | 524 |

The total number of assignments made includes deep support, as well as call fires, but does not include scheduled fires on Dog day nor initial call fire assignments. The soundness of the basic communication plan is best attested by the ease with which so many assignments were made. A brief description of the procedure employed follows.

The Naval Gunfire Officer attached to Landing Force HQ ashore twice daily submitted consolidated requests for fire support ships. Requests for day assignments were submitted prior to 0400 and requests for night assignments prior to 1500. Ships were then selected to fill requests based on ammunition aboard and time idle since last assignment, and their availability checked with Screen Commander. Upon receiving his concurrence, assignments were made and notice given to each individual ship and to the corresponding regimental or Division Liaison Officer, who, in turn notified the Shore Fire Control Spotter.

Notice of assignment included a designation of the frequency to be used and the general area from which fire was to be delievered. Some difficulties were experienced in establishing contact, but these were usually solved by a request for assistance to the Regimental Liaison Officer. The Task Force Commander periodically checked each call fire net to see if conditions were satisfactory.

It is felt that the continuing program of training at KAHOOLAWE Island, which was previously mentioned, is responsible for much of the smoothness and facility with which ships handled their call fire assignments.

It is recommended that assignment of ships to call fires be to the Regimental Naval Liaison Officer and not to Battalion Shore Fire Control Parties. (Not over two per regiment should be needed except in exceptional cases.) The Regimental NLO can then assign ships to battalions on a basis of need and can instantly meet changing conditions by reassignment.

## CAMOUFLAGE

*CTU 53.5.3 comments and recommends:*

The fact that some ships may be seen more easily because of the bright patches in the camouflage, particularly during moonlight and when the sun is at low altitude, has been noted. The effectiveness of camouflage merits further study before additional steps are required to repaint to conform to latest camouflage patterns.

## COMBAT INFORMATION

*CTF 51 comments and recommends:*

Front line data was accurately submitted by all Shore Fire Control Parties *upon request*, and was of great value in establishing safety lines and preventing inadvertent fire into adjacent units. Firing ships, however, rarely had up-to-date front line data available and apparently made little effort to secure it. Many instances of starshell cases falling within our lines were reported, which probably would not have occured if the firing ships had been more attentive to securing and maintaining complete information of troop locations. Accurate information is particularly important to firing ships using direct fire at targets of opportunity. In this connection, it should be a prime consideration for Shore Fire Control Parties to see that their ship has such data.

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Several instances were reported of incorrect spotting due to the spotter's failure to determine the ship-target line. It has been suggested that present standard procedure be amended to provide for this information being automatically given by the ship when commencing fire on each new target. Present doctrines, of course, in no way prevent such procedure.

Much information of front lines, enemy activities, strong points, etc., was secured via Fire Control circuits considerably prior to receipt of the same information via the usual command channels. This information was of great value to Troop Headquarters Afloat.

## COMBAT INFORMATION CENTER

*FIGHTER DIRECTION AND RADAR*

*CTG 58.1 comments:*

During the operations covered by this report, a lieutenant, U. S. Naval Reserve, Fighter Director Officer of YORKTOWN, was attached to the Staff of ComTaskGroup 58.1 on temporary duty and acted as Task Group Fighter Director. The operations proved to be a triumph for fighter direction for which great credit is due this lieutenant and all fighter directors in the Group. A separate Fighter Direction and Radar report follows:

*10 JUNE - 25 JUNE*

1. The form of this report is believed to be an innovation and a more desirable method of presenting Radar and Combat Information Center data. Heretofore, radar contacts on enemy air or surface craft have been listed in chronological order with the bearing and distance, course and speed of each carefully and monotonously appended. When interceptions of enemy planes were attempted or effected by Combat Air Patrols or Night Fighters, the CIC plots (in polar coordinates) were photographed and reproduced for the action report. Both of the above methods ignored the ship's movements and geographic position.

In order to reproduce the necessary information simply and graphically, during these operations a DRT chart was maintained 24 hours a day on the Task Group Flagship, U.S.S. HORNET, by CIC personnel under supervision of the Task Group Fighter Director Officer. A scale of 16 miles to the inch was used and the HORNET's position was plotted every 15 minutes. All Radar and CIC information was plotted on this chart with respect to the ship's position at the time of the contact. The DRT was readjusted to the Navigator's Fix as necessary. Two charts covering the period 10-11 June and 19 June are shown on pages 54 and 55.

AN EXCELLENT TYPE OF PRESENTATION.

2. It should be noted that reproductions of Polar Coordinate plots of interceptions are still of value as they are important to personnel of other CIC's and to the various CIC Schools. The CIC report submitted by the U.S.S. YORKTOWN covering this operation is excellent in this respect.

3. During this operation, Fighter Direction proved itself a tremendously powerful defensive weapon, as is revealed by the charts and borne out by the following statistics:

(a) Of 332 enemy aircraft shot down by VF of Task Group 58.1, 143 were shot down by Combat Air Patrols as a direct result of Fighter Direction. 29 more were destroyed over GUAM on 19 June as an indirect result of Fighter Direction. Early that morning a division of BELLEAU WOOD CAP were sent to investigate a Bogey in the GUAM area and found themselves in the midst of a hornets' nest of enemy aircraft. This was the first indication that enemy carrier aircraft were arriving at GUAM in force. The Task Force was immediately alerted to the enemy's strategy and reinforcing VF were sent in from all carriers to counter the enemy planes.

(b) Of 33 interceptions initiated as a result of radar or visual contacts, 28 were completed successfully, resulting in the destruction of 141 enemy planes. Two enemy snoopers were shot down by fighters of Anti-Sub, Anti-Snooper teams.

(c) Of the five interceptions which failed, one was a night interception which was handicapped by late launching of the night fighter. The other four were directed against single enemy snoopers all of which used effective evasive tactics. Two were within radar range when all CAP's were occupied with heavier enemy raids.

(d) There were 9 heavy enemy raids containing anywhere from 6 to 100 planes directed against this Task Group. All were intercepted and destroyed, or dispersed, between 40 and 75 miles from the disposition as a result of Fighter Direction and efficient Radar operation. Only one enemy aircraft attempted to penetrate the Screen and this plane, a Kate, was promptly shot down in

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the midst of Task Group antiaircraft fire by CAP directed to the scene by visual direction.

4. One of the most imporant factors in the success of Fighter Direction during this phase was the instantaneous reinforcement of standing Combat Air Patrols. Whenever one division of the standing two-division CAP was committed to an interception, 8 more VF were immediately launched if another Bogey contact appeared on radars. Thus adequate VF protection was provided when the larger raids appeared.

Enemy Aircraft Shot Down By Task Group 58.1

| Date | Strike or Search Planes | CAP | ASP | No. of Interceptions |
|---|---|---|---|---|
| June 10 | 0 | 0 | 0 | 0 |
| 11 | 33 | 8 | 0 | 8 |
| 12 | 16 | 2 | 0 | 2 |
| 13 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 1 | 0 |
| 15 | 33 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 |
| 19 | 29 | 80 | 0 | 11 |
| 20 | 9 | 0 | 0 | 0 |
| 21 | 1 | 0 | 1 | 0 |
| 22 | 0 | 0 | 0 | 0 |
| 23 | 0 | 5 | 0 | 1 |
| 24 | 68 | 46 | 0 | 6 |
| 25 | 0 | 0 | 0 | 0 |
| Totals | 189 | 141 | 2 | 28 |

Grand Total: 332 Shot down.

A GOOD TEAM WORKING AS A TEAM GAVE EXCELLENT RESULTS.

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## Legend for CIC Charts

| Symbol | Meaning |
|---|---|
| ASP | Anti-Snoop and Submarine Patrol. |
| CAP | Combat Air Patrol. |
| Bg (Bogey) | Unidentified Aircraft. |
| RD | Raid (by enemy aircraft). |
| TL (Tallyho) | Sight contact. |
| AG (Angels) | Altitude. |
| Splash | Enemy shot down. |
| Skunk | Surface contact. |
| Shad (Snooper) | Enemy search plane. |
| Window | Radar countermeasure. |
| SM | Special search radar. |
| SG | Surface search radar. |
| SK | Aircraft search radar. |
| VF | Fighter. |
| VFN | Night Fighter. |
| VB | Bomber. |
| VT | Torpedo Bomber. |
| DD | Destroyer. |
| Coal, Plasma | U.S.S. YORKTOWN |
| Iron, Ripper | U.S.S. HORNET |
| Burma, Whirlaway | U.S.S. HORNET |
| Coke, Presto | U.S.S. BELLEAU WOOD |
| Jungle, Token | U.S.S. BATAAN |
| Rinso, Keyboard | U.S.S. LANGLEY |
| Chili, Huntress | U.S.S. COWPENS |
| Silver, Varga | U.S.S. MONTEREY |
| Longhorn, Choker | U.S.S. SAN JACINTO |
| Bald Eagle | CTF 58 |
| •——→•——→ | Ship's Track. |
| x——→x——→x | Track of Enemy or Unidentified Aircraft. |
| 0——0——→0 | Track of Friendly Aircraft. |
| [•] | Emergency IFF. |
| (x) | Merged Plot - Friendly and Enemy Aircraft. |
| 0——→0——→ ≀ | Fade - Radar Contact lost. |
| (x) | Enemy or Unidentified Aircraft in orbit. |
| (0) | Friendly Aircraft in orbit. |

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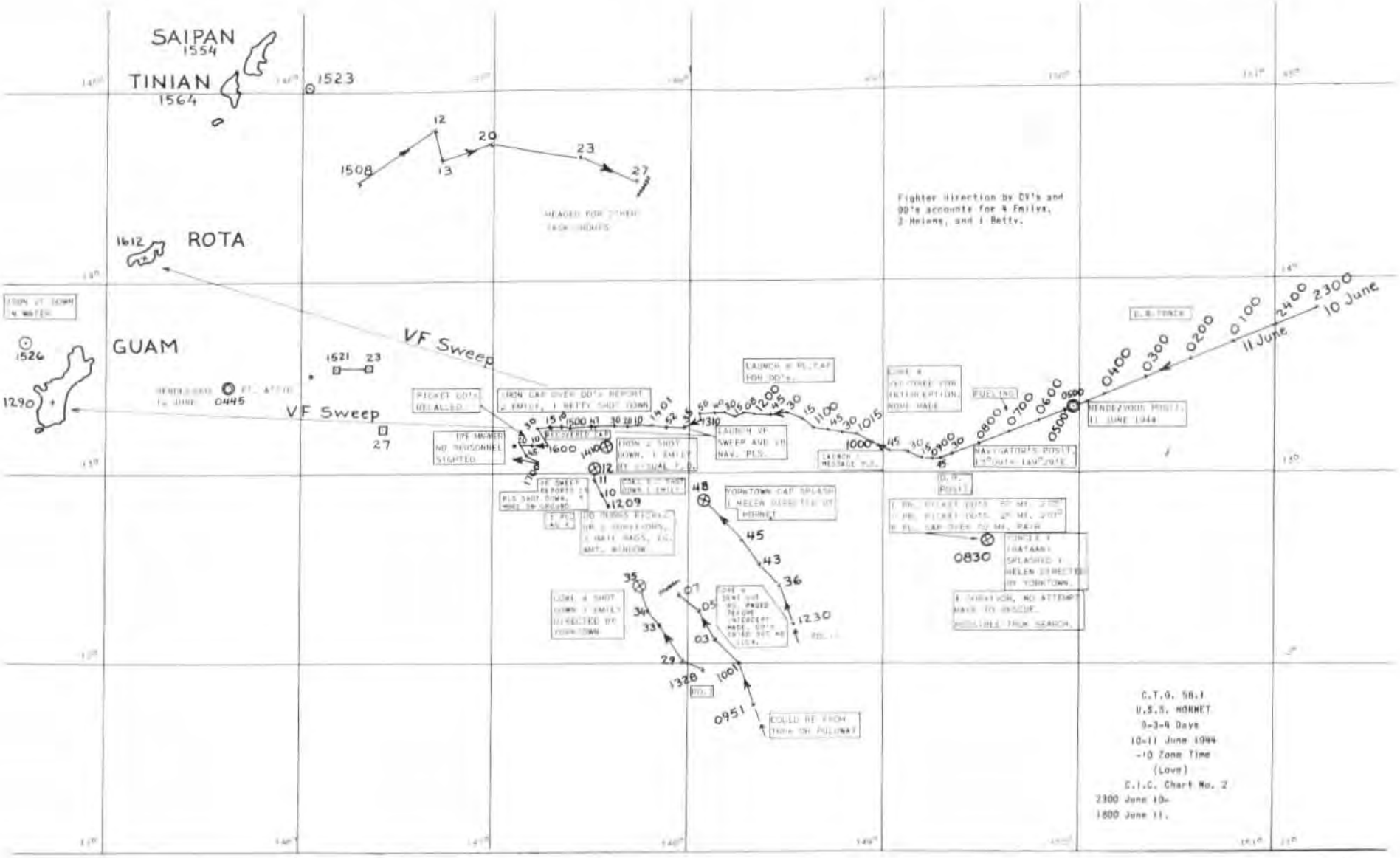


AN EXCELLENT PRESENTATION

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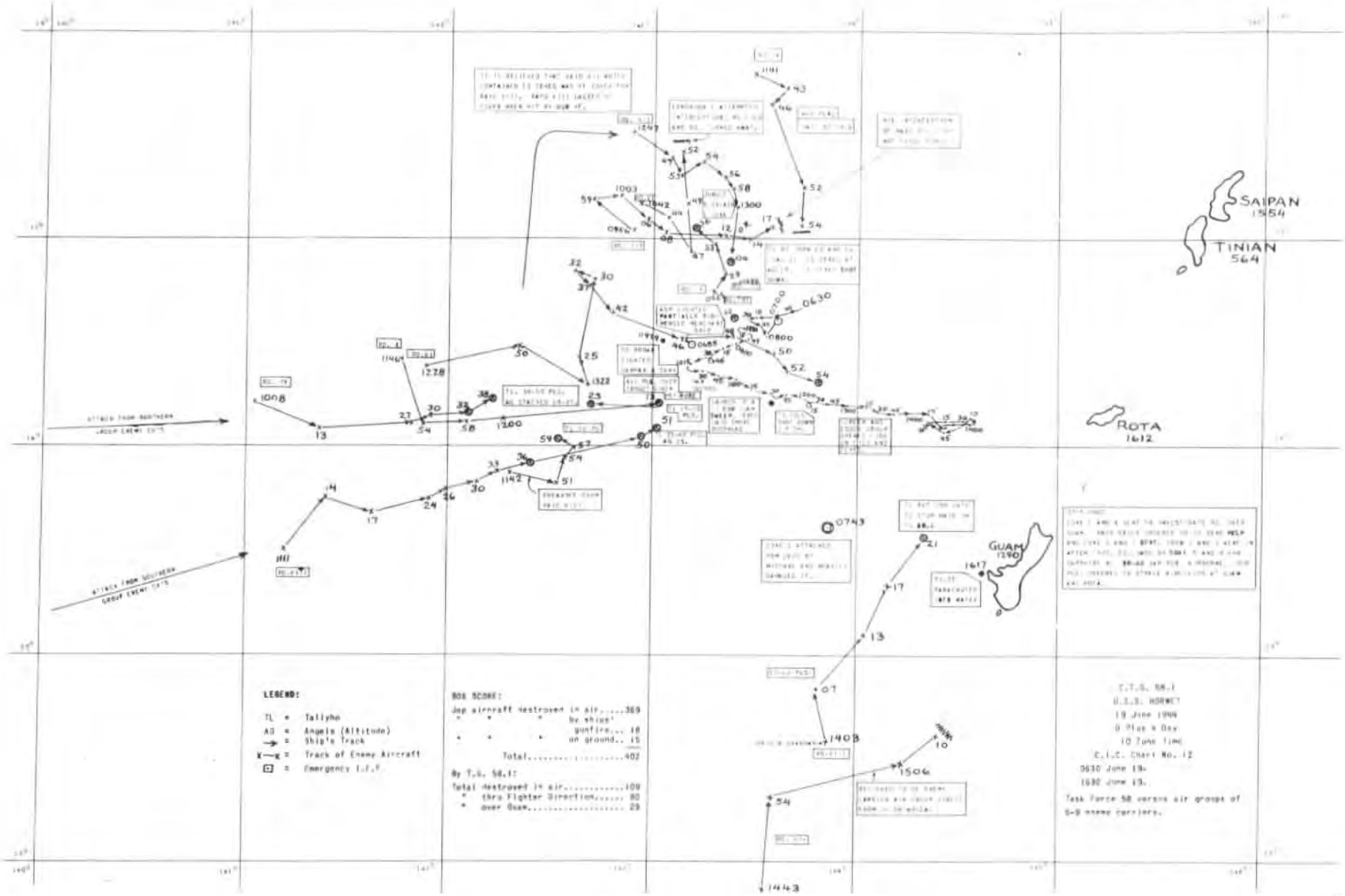


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*CTF 58 comments and recommends:*

1. Generally speaking, the radar and Fighter Director operations were quite successful against the enemy on 19 June. The four major attacks were each hit at ranges of some 50 to 60 miles from the carriers, and each time with sufficient altitude advantage to our fighters. It was the first time that a major enemy air blow has been made on our forces without loss of or serious damage to at least one of our carriers. It proved that the long and costly efforts in research, training, and the practical application of radar have not been in vain.

2. Fighter Direction communications again proved to be most trying. As the Fleet was in the process of exchanging 233-A VHF radio gear for the ARC-5 gear, no Task Group had carrier aircraft all equipped with the same kind of gear. It was therefore necessary to assign two Task Groups to each Fighter Director channel. This system was entirely unsatisfactory, particularly during the four major attacks. It is very difficult to control more than one interception on any one channel and with two groups attempting to operate on a single channel, conditions at times were most disheartening. It is considered that this Task Force was extremely fortunate in being able to get the necessary communications through to the fighters, at the necessary times to consummate these interceptions successfully.

3. Mark III IFF was indicated occasionally by snoopers around the force and was also prevalent to some extent during two of the raids on 19 June. The Fighter Director Officers must weigh the tactical situation, position, altitude, and approach of friendly aircraft before definitely evaluating as friendly when operating in any combat area.

4. Task Force Fighter Direction was effected to the following extent during the attacks of 19 June:

(a) Every effort was made to insure that an adequate number of fighters were being vectored out against each raid. This was done by use of VHF channel one, TBS channel two, and by using the radar itself.

(b) Insofar as possible, every effort was made to insure that an adequate supply of fresh fighters was available for any subsequent raids. This necessitated a policy of keeping the force into the wind for landing, refueling, rearming, and launching fighters as the tactical situation permitted.

Any attempt to assume control of the Task Force the way the Task Group Fighter Director assumes control of the Group just isn't possible or practicable under the limitations of our present communication equipment.

5. The present system of having a voice call *and* a fighter director call for each base carrier is confusing, particularly when operating with twelve to fifteen carriers. It puts an unnecessary burden upon the pilots and tactically has no value for Fighter Director Operations. It is recommended that each ship be assigned *one call*, used for both voice and Fighter Direction purposes. Search and attack planes should have their numbers prefixing the base call as is now in effect while the Combat Air Patrol should have their numbers suffixing the base call.

6. It has been noted that after several months of continuous operation, especially during long cruises at sea, there are increasing occurrences of temperary mechanical breakdowns in the detection radars.

*RADAR*

*CTU 53.5.3 comments and concludes:*

As noted by Wichita and other ships, radar spares become critical on extended operations of this nature where instruments are in almost constant use. The depletion of spares severely compromises the efficiency and reliability of the equipment. This question arises so often that it is believed the whole matter of classification of radar spares (as between tender and ship), and the number of spares to be carried aboard, should be reconsidered at the earliest possible date.

*CTG 53.2 comments and recommends:*

A considerable stock of radio and radar spares was carried on this operation and proved very valuable for servicing this and other vessels during the operations. Good stock should be carried on all future operations for all types of equipment used by the vessels involved. The ECM repair man attached to the staff was called upon frequently to put machines back in service that were beyond the repair capabilities of the ships concerned. Only a small repair kit of parts was available. It is recommended that "tender spares" be made available for future operations.

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*RADAR COUNTERMEASURES*

*CTF 51 comments and recommends:*

1. No countermeasures other than interception were employed by this force. Considerable effort was expended in the location and identification of what eventually turned out to be newly-installed U. S. Army shore radars. Information concerning such installations should be promptly disseminated to own forces in a local area. The effort was not wasted, however, as it gave valuable experience in the development of jury-rig Radar D/F equipment (use of the SK array as a directional receiving antenna for the radar intercept receiver). The results obtained served to emphasize that a broad-band directional antenna should be provided for use with the AN/APR-1 radar search receivers. The SK antenna cannot be made available for the direction-finding of enemy radar installations during the early phases of the assault except for a few moments now and then, yet the interception which a separate antenna would permit at this time might be of considerable value.

2. No definite instance of enemy jamming of our radars was experienced. Several instances of radar interference were reported, caused by VHF or other radio equipment harmonics, or BL equipment.

**THE NECESSITY FOR CLOSE COOPERATION BETWEEN ALL FORCES USING RADAR IN AN AMPHIBIOUS OPERATION IS EMPHASIZED BY THE ABOVE COMMENT. ANY AMPHIBIOUS RADAR MUST COVER ALL RADAR IN THE AREA, NOT JUST SHIPS, SHORE, AIR WARNING, OR FIGHTER DIRECTION. IMPROVED COUNTERMEASURES AND IMPROVED ANTENNAE ARE COMING. HOWEVER, AS OF TODAY NO SOLUTION TO THE MULTI-DEMANDS FOR FREE SPACE ANTENNAE IN SHIPS IS APPARENT.**

3. Enemy use of WINDOW has been the subject of separate reports. During night aid raids on SAIPAN, the enemy repeatedly dropped large quantities of WINDOW which affected shipboard air search and fire control radars and night fighter air intercept radars at various times. Reasons for dropping WINDOW appear to have been:

(1) to conceal raid splits.
(2) to conceal changes of course.
(3) to cover retirements.
(4) to provide cover in which to orbit while waiting to make a coordinated attack with another raid.
(5) possibly to prevent interception by our night fighters.

The WINDOW retained its definition on the scopes of shipboard air search radars throughout its fall. WINDOW gave a considerable echo on the Mark IV radar of one ship, but the enemy plane was distinguished from the WINDOW by the fact that the fluctuations of the pips caused by the WINDOW were more rapid than those caused by the plane. WINDOW appears to have had more nuisance than deceptive value; it hampered tracking slightly, but did not interfere appreciably with detection.

ARE WE PREPARED TO DO AS WELL?

*RADAR OPERATIONS*

*CTU 53.1.15 comments:*

Radar fire control methods do not seem to be entirely adequate for expeditiously locating and hitting a target on rising ground. This problem is under study in Battleship Division FOUR.

*CTF 51 comments and recommends:*

1. The value of Radar develops continuously with more experience in its use. In this operation various ideas, some new, were tried out and justified themselves. Among these was the team guardship system for large dispositions and anchorage areas. Instead of one guardship, or group, trying to be "all things for all purposes" a division of responsibility was made by several types of guards. Vessels were assigned for Long Range Air, Medium Range Air, Surface and Anti-Submarine, and Low-Flying Aircraft guards. Screening in depth (distances) was accomplished. It is believed that this teamwork definitely increased the efficiency of radar coverage and continuation of the basic principle is recommended.

THIS IDEA IS BEING INCORPORATED IN USF IOA REVISION.

2. Trouble was experienced with the anti-torpedo-plane radar coverage of the anchorage areas, culminating in the torpedoing of the MARYLAND by a plane whose approach had been undetected. Land echoes and echoes from the large number of own ships and aircraft were at least partly responsible for this. Strenuous efforts to improve

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low-flying air search and detection must be continued.

TACTICAL DEPLOYMENT TO OFFSET LIMITATIONS OF RADAR IS ESSENTIAL.

3. During the cruise to the objective, numerous radar reporting drills were held. They proved necessary and gave greater uniformity and accuracy to reports. A detailed standard form for Radar reports was promulgated. Several new types of radar drills were developed, and suggestions for their permanent employment have been covered in separate correspondence.

4. There is an immediate need for the installation of SP radar in headquarters ships. During nightly air raids, shore-based night fighters could probably have been vectored to intercept enemy planes much more efficiently had this type of radar been available at the objective. Fighter direction was carried out fairly well by the use of SC, SK, and FD radars and teamwork among the guardships, but fighter direction had to be passed from one ship to another.

*Recommendations:*

1. That the development of teams of radar guardships be adopted as a standard principle to provide screening in depth.

2. That broad-band directional antennas be provided for radar search intercept receivers.

3. That SP radars be provided for headquarters ships as soon as possible.

4. That renewed effort be directed toward improving the ability of ships to detect and track low-flying aircraft.

5. That efforts be continued to improve arrangement and adjustment of communication and radar equipment in all types of vessels.

ALL OF THE ABOVE ARE NOW UNDER ACTUAL CONSIDERATION AND EVERY EFFORT IS BEING MADE TO SATISFY FLEET DESIRES.

6. That radar beacons be utilized to the fullest practicable extent for call fires.

THE TABLES OF ORGANIZATION AND EQUIPMENT FOR JASCOs ARE BEING AMENDED TO PROVIDE FOUR (4) RADAR BEACONS FOR EACH JASCO, TOGETHER WITH TWO NAVY RADIO TECHNICIANS FOR EACH BEACON.

## COMMUNICATIONS

*ADDITIONAL VOICE TRANSMITTER*

*CTF 51 recommends:*

That the maximum number of destroyers, assigned for call fires, be furnished an additional voice transmitter in order that they may transmit on the gunfire control frequency while working with shore fire control parties.

*BEACH NAMES*

*CTF 52 recommends:*

Do not name beaches on adjacent or near islands with the same names. That is, do not have WHITE Beaches on one island and on an adjacent island have another WHITE Beach.

*CRUISE TO OBJECTIVE*

*CTF 51 comments and recommends:*

Radio silence was maintained except on VHF. Even on the latter, no traffic was handled in the low range of the SCR 608-610 except at night. Frequent drills of all kinds using VHF and tests of IFF were held. Radar reporting drills and exercises in Radar Guardship teamwork proved very valuable.

NAN signalling had its first real test and was moderately successful. Experimentation with procedure finally resulted in use of the "steady dash reception" system, blinking light off twice to indicate reception of each word. This equipment has definite value and should be developed. All combatant vessels should have NAN signalling equipment and point of train lights as soon as practicable.

EXPERIENCE SHOULD IMPROVE ITS RELIABILITY

*DURING CALL FIRE PHASE*

*CTG 53.2 comments:*

Due to lack of standardization of equipment both at sea and ashore, communications may be called satisfactory only because of the efforts of all concerned. Communications aboard GEORGE CLYMER, PENNSYLVANIA, and all cruisers were con-

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sistently excellent as were communications to Regimental liaison parties and the Brigade, particularly where the SCR 694 was used. Other stations, i.e., destroyers and battalion parties, experienced great difficulties. This is due to two factors; one, the firing ship getting off frequency when firing, and two, use of the SCR 284 and TBX radios ashore, neither of which are waterproofed and both of which make large cumbersome loads for the carrying personnel. Ships fail to understand that spotters are in the front lines and that their safety is definitely jeopardized by any excessive transmission. This is particularly so at night and ships repeatedly asked various information of parties that the parties were slow in giving due to the fact that the sound of the generator or the showing of a light caused attraction of enemy snipers.

During a heavy rain, almost without exception all TBX and ACR 284 radios were out. Several instances of relaying were experienced, and ships were able to do so without delay.

The majority of intelligence information aboard GEORGE CLYMER was received over the gunfire common. This must continue and is good practice, as ships were aware of the front lines, targets, etc.,and were able to deliver more intelligent fires. Further, this information was of help to the ground units as it was also disseminated laterally. The gunfire common channel was also used for assigning ships to shore fire control parties, assigning frequencies, arranging scheduled fires, checking fires, and for coordination of air strikes with gunfire. While this channel carried a tremendous volume of traffic, there was never any excessive backlog or breakdown in the handling of such traffic

The communications setup on GEORGE CLYMER was considered excellent. The only real difficulty experienced was in one instance when consistent jamming occurred for a period of about 70 minutes. It is believed that this jamming was enemy. This opinion was concurred in by PENNSYLVANIA.

Insufficient equipment still exists aboard destroyers to enable all of them to transmit and receive on both the common channel and the designated shore fire control party channel. This necessitated relaying messages of any urgent nature or using the CTG 53.2's TBS. Only a few instances of this occurred, however.

PACIFIC FLEET DESTROYERS HAVE BEEN AUTHORIZED RECENTLY ONE TCS, PENDING PRODUCTION AND DISTRIBUTION OF VOICE MODULATORS FOR THE TBK TRANSMITTER.

*CTF 53 comments:*

Shore fire control party communications were very satisfactory, considering the obstacles involved. Portable radios used by shore fire control parties are subject to definite limitations of power and reliability even when operating under ideal conditions; under combat conditions, the job done by these shore fire control parties in maintaining communications day after day is worthy of commendation.

The Naval Gunfire Common Circuit functioned satisfactorily except for the inability of certain destroyers to maintain transmitters on both their shore fire control circuit and the Naval Gunfire Common. This condition worked a definite hardship on the Naval Gunfire Common Circuit because acknowledgments to important transmissions by ships concerned had to be made by TBS or visual. This method is awkward and entirely unsatisfactory, and it is urgently recommended that fire support destroyers be provided with sufficient transmitters to correct this condition. Since this situation was anticipated by CTF 53, portable TBX radios were provided for the nine destroyers of Destroyer Squadron 45. This provided only a partial solution, however, inasmuch as several other destroyers in addition to those of Destroyer Squadron 45 were later utilized for call fires. In any case, portable TBX radios are not considered suitable for this use except as a stop-gap measure.

It was found that night illumination could best be handled by calls from individual shore fire control parties rather than by strict schedule from higher headquarters. Consequently, after the first few nights, illumination missions were performed in accordance with requests from shore fire control parties.

*ESTABLISHMENT OF SHORE FACILITIES*

*CTF 51 comments and recommends:*

Initial shore communications were set up quickly and functioned approximately as designed for the assault phase. Some minor difficulties carried over into the consolidation phase, when they could have been more rapidly cleared up.

The forces afloat relayed some traffic that could have been transmitted directly to and from rear areas. In the early consolidation stages, dispatches from rear areas were sent to forward area shore stations in codes not held so that translations had to be obtained afloat or retransmissions requested. The delays caused thereby were more apparent than real, however, since the headquarters ships usually intercepted the trans-

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missions, realized the shore stations could not decode, and sent translations ashore before they were asked for.

It is suggested that the regular harbor circuits, under control of a well-organized Joint Communication Center ashore, should be established as early as practicable for the use of merchant and auxiliary types, even though the combatant units are still using their tactical communication organization.

After the MARSHALLS operation, the recommendation was made that headquarters ships be provided with cable providing a ship-shore land-line link. Recent correspondence has proposed the provision of radio teletype for this service. Either provision would be of great value in conducting local ship-to-shore communications.

*GENERAL*

*CTU 53.5.3 comments and recommends:*

In general, communications were much improved over similar operations in the past. TBS discipline was excellent.

Communications on the naval gunfire common (3905 kcs) were as satisfactory as can be expected when communicating with stations ashore that are using portable equipment. The circuit was frequently overloaded, however, by relays and repeats. The principal shortcomings of the equipment, in addition to its low power, are susceptibility to atmospheric interference and interference from other voice circuits, and difficulty of keeping tuned to the assigned frequency.

CLEVELAND's suggestion that part of this traffic could be put on plain language C W circuits has merit. For instance, administrative traffic could be relegated to an administrative C W circuit by the officer controlling the circuit if he felt voice circuit was overloaded. In this connection, frequency with which routine reports are required to be submitted might be reduced.

*ComBatDiv TWO comments and recommends:*

1. In the TINIAN operation, radio communications lacked proper administration for reliable and efficient uses. The primary contributing factor to this inefficiency was lack of circuit control on most channels. Misuse of radio channels, lack of circuit discipline, and departures from prescribed radio doctrine were predominant during the assault and throughout the operation. These deficiencies have existed in prior Central Pacific operations, but adequate steps have not been taken by control stations to correct them. Before efficient communications can be attained, officers controlling radio circuits will have to enforce and maintain rigid control over all channels within their jurisdiction.

A FAILURE OF COMMAND! COMMAND MUST HAVE UNIVERSALLY-UNDERSTOOD DOCTRINE. BY THIS, WHAT ONE COMMAND HAS TO SAY TO ANOTHER IS REDUCED WITHIN THE BOUNDS OF REASON. ARE WE TRYING TO CORRECT MISORGANIZATION BY PRIVATE VOICE COMMUNICATION LINES TO COMPENSATE FOR LACK OF TRAINING, INDOCTRINATION, AND RELIANCE IN JUNIORS TO FOLLOW THE PLAN?

2. ComBatDiv 2 recommends strongly the use of radio telegraph (CW) on important channels. The speed, efficiency, and circuit control which is mandatory for good communications can be accomplished easily by use of radio telegraph. By use of low-power and controlled antennae, emissions on low and intermediate frequency bands below 600 kcs., plain language transmissions by CW would be just as secure, and at times more secure than the lower end of the high frequency bands using voice. The use of certain voice channels between Shore Fire Control Parties, spotting planes, naval gunfire observers, and other like channels, where it is preferred due to lack of trained RT personnel, ease of operation and where the channel serves two or three stations, could be worked to a high degree of efficiency, providing the proper circuit discipline was maintained by the control station.

(AN EXCELLENT RECOMMENDATION)

3. Radio equipment functioned to a fair degree of efficiency. The most predominating troubles observed were due to (1) improper tuning of transmitters (voice) where it was obvious that overmodulation was being encountered; (2) use of excessive power causing interference to the other closely associated channels, and, in some cases, completely blocking out receivers that were far removed in frequency of the transmitting channel; (3) failure of technical personnel to diagnose readily simple troubles and correct them with minimum delay. Experienced radio officer personnel, with sufficient technical knowledge of equipment and its uses, can improve equipment operating

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efficiency by personally monitoring the channels from time to time, observing deficiencies, and taking immediate steps to correct same.

4. Visual communications functioned very well. Visual channels were not overloaded and should have been used more often, thus relieving overloaded radio circuits of administrative traffic.

*CTG 53.5 comments and recommends:*

1. Throughout the entire GUAM operation, communications were most satisfactory. In looking at the overall picture, the magnitude of the communications necessary to the successful conduct of an amphibious operation of this nature would make inevitable some breakdowns during the course of the operation. Yet, throughout the operation, there were no major defects noted. A volume of traffic, both radio and visual, far greater than for any similar period in the experience of this command was handled. Traffic addressed to or originated by this command was expeditiously handled.

2. The use to which CW nets were put in this operation was the most satisfactory yet found. The Force Fox circuit was used as such throughout the entire period, enabling the task force commander to handle expeditiously operational traffic to his force in the vicinity without resorting to HONOLULU Fox with its attendant delays. At the SAIPAN operation the Force Fox degenerated into a free-for-all at times among all ships, making its use as a sure means of delivering traffic via Fox method of doubtful value. Consequently, the use of HONOLULU Fox was necessary, adding traffic to an already overburdened schedule.

3. This command in the course of carrying out its fire support missions had many occasions to deliver traffic to individual ships, effecting quick delivery via the Force Fox. Traffic was sent to the force flagship by means of the Task Group Commanders circuit (2170 kcs.), and, in all cases except one traffic was placed on the Force Fox within ten to fifteen minutes from the time of its delivery. The one case of failure occurred when, through inadvertence, the relay was not effected. In this case, however, the task unit commanders had intercepted the despatch as it was being sent to the force flagship, and were able to pass the essential information to ships of their command so that there were no serious consequences.

4. Voice circuits were well used, were sufficient in number, and offered satisfactory communications at all times. There were enough voice channels provided so that the often overworked TBS was not jammed with all sorts of transmissions as has been experienced in so many previous operations. The TBS was not actively controlled, but for the most part it was not necessary to do so. At times, several stations out of range of one another would transmit simultaneously, cutting both stations out for those ships between the two, but in most cases the "listen before transmitting" rule worked very well. The usual complaint can be made that too much extraneous matter was placed on this channel which should well have been sent visually or on another channel. This, however, while it should be corrected did no great harm.

5. Communications on the Naval Gunfire nets were usually excellent. Difficulties were encountered establishing contact with shore parties at times because of the low-powered sets in use, plus the interference caused by the terrain and atmospheric conditions. Day communications were usually good, but nearly every night interference was so great that contact with the shore station was virtually impossible. By means of relays from a ship stationed as close inshore as practicable, some semblance of communications could usually be maintained. In spite of the number of stations involved on the gunfire common, it was seldom necessary to exercise positive control. Circuit discipline and procedure was good, though there was a tendency for shore parties to transmit "ad lib" messages and speak too fast, making repeats necessary.

6. From experience in this operation, the one important recommendation that comes to mind is to provide shore parties with more powerful equipment to insure adequate communications at all times. The lack of contact with the beach might prove disastrous on some occasion unless positive control can be provided at all times over naval gunfire. As a temporary expedient until all shore parties can be provided with more powerful equipment, it is strongly recommended that the division gunfire liaison officer be given suitable equipment to insure adequate communications under all conditions. If such equipment could be brought ashore and set up as soon as practicable after the initial landing, relays could be effected if required, utilizing wire communications among parties on the beach.

*CTF 53 comments and recommends:*

1. Considering the difficulties inherent in radio communications and the large volume of traffic handled, communications were for the most part excellent. A noticeable improvement over the MARSHALLS operation was observed.

2. Despite careful study of frequencies,

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harmonic interference still occurs. Frequencies must be even more carefully selected and apportioned to avoid this pitfall.

THE AVAILABLE NUMBER OF FREQUENCY CHANNELS IS LIMITED AT BEST. A DEMAND FOR ADDITIONAL CIRCUITS NECESSITATES FURTHER CROWDING AND MORE INTERFERENCE. WILL NOT BETTER COMMUNICATIONS AND THUS COMMAND CONTROL BE HAD BY FEWER WELL-SPACED CHANNELS?

3. Although some transmitter spill-over was present, most of it was due to operators not using equipment efficiently. Operators must be more thoroughly trained in the use of standard U.S. Navy radio receivers.

4. The issue of publications was again unsatisfactory and, as movement to the West progresses, it is likely to become more unsatisfactory unless positive corrective action is taken.

5. The use of a liaison officer with higher echelons of command is a very suitable method for getting communication planning information while it is in the formative stage.

6. The policy of making changes to current tactical publications "effective upon receipt" should be changed to allow time for complete distribution.

7. An ECM specialist should be assigned AGC's for care, upkeep, and emergency repair of ECM's of vessels of an Amphibious Task Force.

8. All ships should be supplied NAN equipment.

9. Sufficient spare VHF (608/610) frequencies should be allocated Amphibious Task Force Commanders to provide a frequency for each beach.

10. Naval gunfire spotting and battalion command communications will not work satifactorily on the same frequency. It is recommended that naval gunfire spotters be assigned spotting frequencies by the Landing Force from frequencies allocated to it.

11. Carefully planned continuous training in judicious amounts is very valuable in making communication plans work.

12. The call sign section is too bulky. A small reduction in size of print would result in a large reduction in number of pages necessary for the call sign section.

13. A mediocre communication plan distributed early enough to train personnel will produce better communications than a perfect plan which arrives the last minute.

14. A special tender with complete radio spares and an adequate Mobile Issuing Office aboard should be assigned to ComPhibsPac for movement with the first or second echelon of the garrison force.

15. LST Flotilla Flagships should have an ECM issued to them, at least during the planning and post assault stages.

16. CCBP 0130-D1 and subsequent issues should be provided variant groups for common terms.

17. When RDO Wahiawa reencrypts traffic it should include the originator as an adee in the heading to assist the originator in determining when his traffic appears on the Fox schedule.

18. Annex B, Part 9, to CentCom TWO should be clarified.

19. The performance of SCR-608 and SCR-610 equipments, as in the MARSHALLS operation, justified their wide use, although the usual difficulties were attendant in such things as 12-volt power supply problems, poor waterproofing for amphibious portable use, antenna design difficulties for ship installations, and technical complexity in tuning and servicing by radio personnel on small vessels.

20. The SCR-694, used for the first time in this Task Force by six Naval Gunfire Control Parties ashore, proved superior to equipments previously used for the shore end of ship-shore Gunfire Control communications. It is recommended that this equipment replace the TBX as procurement allows, and that it be used for the Naval Gunfire Control Parties and Air Liaison Parties on shore in future operations.

21. The TBY equipment was used but little, and then only as a TBS substitute on small vessels, its intended functions being performed more satisfactorily by the SCR-610 and SCR-536.

22. The SCR-536 was widely and successfully used by control boats, beach parties, and by the Underwater Demolition Teams. Further and expanded use is recommended. Positive waterproofing must

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be provided for Underwater Demolition Team use, however.

23. Radio operating personnel of combined ship and flag compliment should total between 120 and 125. Ten communication yeomen and eight communication orderlies also are required.

24. After the assault, shore visual signal stations with interlinking telephones and telephonic connection to the Joint Communication Center, Port Director, and Boat Pool should be established as quickly as possible and in the following order: (1) Garrison Unloading Beaches (2) Port Director (3) HECP and linking stations to provide effective visual relays ashore.

25. Hospital ships should be furnished TCS and SCR-610 equipment (tuned to 34.8 and 33.2 mcs) for necessary communications in connection with handling casualties.

26. Naval Communication Officers of all merchant ships carrying Garrison equipment and supplies to forward areas should have SCR-610 radios (tuned to 34.8 and 33.2 mcs).

27. More liaison is required between communication personnel of Garrison Forces, Island Commander, Port Director, Air Warning Services, Landing Force Commander and Attack Force Commander during planning stages. Complete development plans should be available to them and studied jointly to detect and overcome inconsistencies or misunderstandings prior to arrival at the objective.

28. All Fighter Direction vessels should be equipped with special VHF radio equipments for Inter-Fighter Direction communications. MN, Motorola, or Galvin equipment of 40 to 50 watts power is recommended. SCR-808 will be satisfactory also.

29. Officer monitors for fleet radio nets are badly needed. Each vessel of appropriate size should be assigned some one circuit to monitor and control from point of view of security and discipline. Monitoring personnel should be supplied as special teams or observers for the operation.

30. Cryptographic aids, other than shackle code, should not be landed until the beach-head has been secured (about Dog plus one day).

31. Amphibious Task Forces should be furnished a pool of radio, sound, and radar spare parts and stock adequate to care for customary casualties and battle damage.

32. A mobile issuing office should arrive about Dog plus five days.

33. Officers who are apt to use voice radio equipment during action must be drilled in voice procedure and measures of security prior to sailing for the objective.

34. Special code words and pyrotechnic signals should not be unnecessarily restrictive in distances, times, numbers, etc.

35. Voice and CW calls should be revised to eliminate unused ones and to supply new calls found valuable. A voice call should be provided for each type of ship and for each type of administrative or tactical unit and its commander, with blanks to be filled with hull or organizational numbers. A geographical voice list should be provided for each objective, or authority issued to used code names on charts in voice radio.

*CTF 51 comments:*

The communications plan prescribed by Annex D to CentCom TWO functioned in excellent fashion. Frequencies, in general, were well selected and properly spaced. All circuits were bothered at times by CW interference, the source of which was never accurately determined. Air Support communications frequently were heard on fire support frequencies - due probably to faulty calibration. In such cases, where interference was persistent, Shore Fire Control Parties were assigned a substitute frequency.

Some trouble was experienced on the Headquarters Ship itself. It was found that transmitting on Shore Fire Control Frequency 3135 completely blocked out the ship's TBS receiver. Similarly, transmitting on Shore Fire Control Frequency 3865 blocked out the receiver on the naval gunfire control net (3845) and vice versa. It is believed that both instances were the result of antenna proximity - a difficult problem on a ship with so many receivers and transmitters. Consequently, both 3135 and 3865 were discarded and replaced by other frequencies from the surplus which was fortunately available.

*CTF 58 comments and recommends:*

1. Communications in general were very good. It is believed that the basic communication plan should be broad and flexible enough to cover every emergency that can be contemplated in advance. NPM HOW and JUMP FOX were received fairly well in the MARIANAS Area, but in the vicinity of PALAU considerable difficulty was experienced by carriers

due to fading between 1800 and 2100 ZEBRA. For reliable communications, it is suggested that a rebroadcast of traffic to operating forces in the Western Pacific Area be made, say from GUAM, during the fading periods. Some enemy attempts at jamming were noted but did not seriously affect communications.

2. Trouble was again experienced with improper use of the TBS. It does not appear to be so much a case of the TBS-Primary Warning and Emergency Tactical Circuit being overloaded as it is the use of incorrect communication procedure whether through ignorance or just plain carelessness.

WHY DOESN'T COMMAND TAKE EFFECTIVE CORRECTIVE ACTION? THIS COMPLAINT IS REPEATED AND REPEATED.

Similar difficulties were experienced on the VHF channels largely because only two channels were available for the Fighter Direction of four Carrier Task Groups. Great credit is due the Fighter Director Officers for getting the traffic through. It is believed that this situation will be relieved shortly; however, at all times Task Group Commanders, Fighter Director Officers, and Squadron Commanders must realize that they are responsible for discipline on the communication channels and can keep them clear by exercising strict control.

3. Task Group Commanders must be prepared to and make use of their Task Group common CW circuits in situations such as existed in 19 June. TBS at such times will always be overloaded. A separate TBS channel for each Task Group is not now practicable. Hereafter, it should be the policy to make the Task Force Common and Task Group Commanders circuit one and the same, either CW or voice. All ships will guard CW during Condition One, when separated or when directed. Task Group Commanders will guard CW and voice at all times, and Task Force Commanders should use the Task Force Common voice for a Task Group Common circuit during enemy action if TBS is overloaded or Task Groups are out of TBS range.

4. It is recommended that, because of the shortage of equipment and operators, consideration be given to eliminating circuits not absolutely necessary.

5. It is recommended that a voice circuit be provided for the battleline. This circuit should be in the two thousand kilocycle band.

6. Submarine information should be sent on channels held by all types of ships so that ships on detached duty, such as bombardment groups, surface raiding ships, etc., may obtain the information without the necessity of the Task Force or Task Group Commanders re-transmitting.

7. It is requested that rescue submarines report names of pilots and parent carriers of pilots rescued as soon as convenient.

*LANDING AND UNLOADING OPERATIONS*

*CTF 51 comments and recommends:*

The SCR 608-610 equipment of the transports and smallcraft served them satisfactorily. Available channels appeared to be reasonably well divided between the various groups and types. Some circuits became overcrowded when operated as "free nets", but the direction of a controlling station smoothed out traffic problems in most cases. The TBM, TCP-TCS equipment and channels could have been used to better advantage in some cases to relieve heavy loads on SCR-610 channels.

In the later consolidation phases, the need for SCR-610 equipment in merchant and auxiliary types to facilitate unloading was acute. This need was partially met by spot installations made by personnel from the headquarters ships. Such installations should be made in rear areas before the ships are sent forward.

*MATERIAL*

*CTG 53.2 comments and recommends:*

It is recommended that Table of Basic Equipment in all Joint Assault Signal Companies be modified by replacement of the SCR 284 with the SCR 694; that provision be made on all destroyers for fire support to have equipment sufficient to transmit and receive on two gunfire channels; that all cruiser and battleship planes be equipped to come up on gunfire spotting channels; that high-powered radios, vehicular mounted, be made available to Division naval gunfire officers and higher echelons.

The SCR 608 and SCR 610 radio equipment proved to be excellent, as was anticipated from reports previously made concerning them. Several deficiencies in this equipment have come to light as its use becomes more general. Similar sets designed for Naval use should take these points into consideration. The SCR 608 derives its power from storage batteries. Its Naval counterpart, if such equipment is ever developed, should be operated from ships' AC or DC sources. The dynamotor should be eliminated as not being suitable

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for continuous operation. On the GEORGE CLYMER as many as eight SCR 608's were operated simultaneously on various channels. It was found that many harmonics were present in the output, resulting in serious interference on nearly all channels. For Naval purposes, where it may be presumed that many VHF channels will be in use, it is essential that the output be restricted to the desired channel to prevent self-interference. Study of the SCR 808 circuit diagram indicates that this piece of Army equipment is so designed as to better attenuate harmonics, and as a result should be a much more suitable equipment than the SCR 608.

The SCR 610 as a substitute for the TBY is entirely satisfactory. It is powered by either storage or dry batteries. It has the advantages gained by crystal control of frequency and is pre-adjusted to operate on either of the two desired channels. When properly encased in waterproof bags, it operated for long periods of time in open boats. Materiel failures were few.

*CTF 51 comments and recommends:*

1. It has been repeatedly recommended that destroyers and cruisers have additional voice equipment to enable them to man promptly all required circuits. It is understood that TCS equipment and TBK modulators will soon be placed in all such ships. A lighter-weight pack set is needed by SFC parties and ALP's.

2. Support Air Communications were very successful and no difficulties were reported. The use of VHF for Support Air Direction is desirable.

3. It is recommended:

(a) That the Waipio Amphibious Communication Training School and special radar maintenance courses at the Pacific Fleet Schools be continued and expanded.

(b) That efforts be continued to replace SCR 608-610 equipment with more suitable types in a higher frequency range.

(c) That the principles embodied in CentCom TWO be continued as the basic communication plan; and that insofar as practicable, supplementary details be issued as inserts thereto rather than as separate documents.

(d) That tender-supply and maintenance ships for electronic equipment be provided to service forces in the forward area; and that until they are available, additional stocks of spare parts be provided in ships present and well distributed in forward areas.

(e) That development of NAN equipment and its use be continued.

(f) That ship-shore radio teletype be developed and installed in headquarters ships.

(g) That radio discipline be strictly enforced, guarding against not only thoughtless, careless and ignorant, but also frivolous and malicious violators.

(h) That all vessels which are to operate with the Amphibious Forces be furnished necessary SCR 608-610 equipment in rear areas.

(i) That all services and all elements thereof make determined and ingenious efforts to develop methods of reducing the number of frequency channels required during assault operations and large-scale action against the enemy.

CONCUR

*CTF 52 recommends:*

Provide tuning kits for all SCR type equipment used by amphibious forces to Group Commanders and Transport Commanders.

*PERSONNEL*

*CTF 51 comments:*

The performance of personnel merits the highest commendation. This applies to both officers and men, who were required to work long hours under heavy pressure. So far it has been impossible to provide really *sufficient* personnel for periods of heavy load. Not only are skilled communication personnel unavailable in adequate numbers, but there is a definite limitation on the number of personnel that can be carried in a headquarters ship because of living space requirements. In the headquarters ship, ROCKY MOUNT, all communication personnel stood watch-and-watch for approximately six weeks commencing D-day. Morale remained high and results were gratifying, but fatigue caused a definite drop in efficiency. Credit is given to the communication school for its pre-operation training of radio operators and message-center

personnel and for familiarizing materiel maintenance personnel with their equipment.

*PLANNING AND TRAINING*

*CTG 53.2 comments and recommends:*

1. Rehearsals were conducted in the GUADALCANAL area. While these were intended to be full-scale rehearsals, it was apparent that the amount of communications involved was not sufficient to locate all the deficiencies, either in planning or materiel. This was particularly true of air support and Naval Gunfire Communications. Satisfactory tests were conducted, but not enough continuous and simultaneous transmissions were made to locate all sources of interference. The necessity of using a large number of circuits simultaneously on an AGC or relief AGC demands that careful, comprehensive testing and rehearsing be conducted prior to an operation in order to eliminate all sources of self-interference.

2. During the rehearsals, the frequencies used were those which were to be used during the actual operation. This was very desirable, as the results obtained on one set of frequencies are not comparable to those obtained on other frequencies. The voice calls used during the rehearsal were not the same as those used in the operation. This was undesirable for the reason that talkers and operators became familiar with one set of calls, only to have to learn an entirely new set a few days later. It is felt that the advantages of familiarizing personnel with voice calls far outweighs the probability of compromising the calls.

3. On arrival at the staging point, further stress was made on correct voice and CW procedure and circuit discipline through daily radio drills. These drills proved very beneficial and should be conducted at every opportunity available prior to an operation. It provides the only positive means of locating materiel and personnel deficiencies.

4. Not enough training was conducted with the landing force or the base force communication unit. In the operation, Naval ship-to-ship, ship-to-boat, Air Support, and Naval Gunfire circuits all worked creditably. Much improvement would have been possible with the landing force communication and with the base communication unit when the consolidation phase commenced if more intensive training had been possible.

5. In previous operations it had been noted that the tactical circuit, TBS, was in jeopardy due to the presence of increasingly large numbers of ships and the fact that several tactical units were quite often within TBS range of one another. The possibility of a ship receiving a fragmentary emergency transmission and acting upon it, even though not addressed to it, is a dangerous one. In this operation it was known that a number of separate tactical units would be in close range during both cruising and assault phases. To provide an alternative maneuvering circuit, an SCR channel was chosen. This proved to be a very efficient maneuvering circuit, and provided security equal to the TBS. It is recommended that consideration be given to the wider use of such independent maneuvering circuits, retaining the common frequency of the TBS as the primary tactical circuit.

6. Choice of frequencies as designated by CentCom TWO was generally good. One circuit, the 4010 Naval Gunfire Support Common, had a persistent harmonic which interfered with the TBS. Slightly off frequency operation eliminated this, but it is recommended that planning correct such interference rather than resorting to makeshift cures in the field.

7. Too many frequencies were common frequencies to task groups and units operating throughout the MARIANAS. Unfortunately, reception conditions were good during the operation, and low powered voice and CW signals were received "Loud and Clear" from stations over 200 miles away.

8. Commencing shortly after William day, the duties of SOPA Administration were assumed by CTG 53.2 in GEORGE CLYMER. This proved beneficial to the communication department as it permitted our operators to enter one of the point-to-point circuits using a shore station call. Enough traffic was handled to release the operators' tension, and also to prove that our equipment was capable of working the necessary distance. From 10 August to 20 August CTG 53.2, (later CTF 53) Administrative SOPA, successfully and efficiently handled all point-to-point circuits in addition to the normal local harbor, warning, and tactical circuits.

9. When the necessity for Naval Gunfire Support and Air Support circuits ceased, it was advisable to remodel Joint Operations somewhat. All voice circuits were terminated there, a CWO put in charge, and all visual and voice circuit writeups made in that compartment. This proved a very efficient system and future planning will include a similar layout for expeditious handling of plain-language traffic both voice and visual. Routing was further improved by using triplicate teletype rolls for voice circuit logs. The original copy of high priority messages was torn off the roll and routed in the rough to the action officers. Use was also made of inter-comm units and ship's service phone for rapid delivery of

messages. All this tended towards being able to make almost immediate replies to voice or visual messages. Smooth copies of all messages were made primarily for later routing and permanent records.

10. Code names should be included for geographical locations at the objective. Voice security was impaired through lack of such code names.

11. Merchant ships should either be assigned voice calls or a standardized system evolved for generating their voice calls.

12. Enemy interference was suspected on the Naval Gunfire control common circuit. It consisted of a steady carrier with a very low level of modulation of a rising and falling character. It was present on two or three occasions for periods of about an hour, and was moderately successful in jamming our own communications.

13. On several occasions, an MCW station was heard on the SCR 608 receivers sending V's and signing "JNQ". It could be heard on various channels indicating harmonic reception. It is not known whether this was from a local shore or ship station, or a freak pickup from some distant station.

*CTG 53.5 comments:*

1. The communication plans for the operation were well written and well planned, offering by their thoroughness the answer to nearly any question that could possibly arise. Unfortunately, however, there were times when problems arose because of unfamiliarity with the details of the plan. Largely these were due to the fact that gunnery personnel, officers-of-the-deck, and others who have not had a thorough background in communications, had to use voice circuits to achieve results. One factor which helped to supply the non-communication personnel with the answers to questions that might arise was in the distribution of communication manuals with extracts of the communication plan, naval gunfire plans, air support plans, et cetera. Copies could be supplied to key personnel and the information was to be found merely by reaching in one's back pocket.

2. It has been suggested that the communication plans of the task forces and groups duplicated and modified CentCom TWO to such an extent that the result was confusion in attempting to assimilate all pertinent information that was to be found in a number of different places. The wide separation of information to be found in communication plans, naval gunfire annexes, air support annexes, et cetera, lessened the effectiveness of CentCom TWO, for oftentimes the latter was at variance with the intentions of the responsible commanders. Thus, in addition to having the most thorough and complete basic communication plan that has yet been devised for an amphibious operation, it became necessary that a communication officer have at his disposal the entire operation plan. This was usually not feasible in most commands because of the limited number of copies available. In order to bring all communications into one volume, thereby eliminating duplication and contradiction, it has been suggested that communication annexes be issued as inserts to CentCom TWO, where the basic plan may be modified, supplemented, or clarified to meet the needs of the task force or group commanders. This recommendation is concurred with in the belief that the benefits to be derived will enable all hands concerned to understand more easily the problems at hand. It is felt that this suggestion, plus that of issuing a digest manual, would greatly enhance the success of communications in future operations. CentCom TWO has demonstrated its effectiveness as a basic plan, and proper use can prove its worth many times over in the future.

*CTF 52 recommends:*

That a standard type amphibious communication plan based on Annex I to Commander Task Force 52 Attack Order No. A11-44 be formulated and incorporated in CENTCOM TWO. This would provide all unit commanders participating in amphibious operations a definite plan to study and use for training. As part of the standard type communication plan at least four separate frequency plans could be provided with specific frequency assignments. Each plan would be suitable for an operation of landing one Regimental Combat Team. A maximum of four plans would be suitable for use simultaneously at the same objective without interference. If such a scheme were adopted, a ready-made and familiar communication plan would be available for use in amphibious operations which could be placed in effect by signal or by a simple statement in an operation order. Time and effort would thereby be saved for training and indoctrination as a direct result of cutting down on the amount of paper work which it is usually necessary to issue and have studied prior to an operation.

*CTF 51 comments:*

1. The Communication Plan, CentCom TWO and subsidiary plans, worked out very well. The many advantages of a single, carefully-coordinated plan for all elements were again demonstrated. Allocation of frequencies was satisfactory, considering the scarcity of frequencies and the magnitude of forces involved. Surprisingly few

cases of serious interference were reported. Interferences which did occur were chiefly on crowded voice channels and were partly due to minor misinterpretations of the plan or off-frequency operation. The principle of "functional communications", especially in the assault stages, was again proved sound.

2. The basic difficulty in planning communications for a large-scale operation is now the scarcity of available channels, partly due to limitations of available equipment. There is an ever-increasing need for more channels for services now using the SCR 608-610 and SCR 300 equipment, covering the frequency bands 27 to 50 megacycles. Army, Marine, air, and surface forces all require many of these channels. The new type MN and MAN radios and drone boats are also in this band. Only the early provision of the new 225 - 390 mcs. VHF equipment in large quantities can effectively relieve the congestion.

3. As operations become larger and more complicated, successful communications can only be attained if all services reduce the channels required by placing more units on a common frequency and improving radio discipline. Visual, wire, and messenger should be used wherever practicable. Radio should be reserved for essential operational traffic. If this is done, placing more stations on the same net improves operational communications by insuring better coordination and a more rapid flow of information, without relays, to those who need to know.

4. The organization charts and diagrams proved valuable as did the pocket-sized manuals prepared for use by beach and control craft parties. Such devices were not intended to and cannot replace a thorough study of the entire organization and communication plan, but they can and do serve as an invaluable aid and handy reminder of important points.

5. CentCom TWO has proved to be a very successful working plan for this type of operation, and should be modified only by issuing changes in necessary details without changing principles.

*REVISED JOINT ASSAULT CODE*

*CTF 52 recommends:*

By studying dispatches and attack orders used by assault forces in actual combat, pick out more useful and up-to-date words, phrases and sentences, incorporate them in a revised Joint Assault Code, and issue such code to amphibious forces as soon as possible.

*SECURITY VIOLATIONS*

*CTG 53.5 comments:*

Security violations could be noted daily, though usually they were of a minor nature. The "shackle" code could be considered compromised daily as persons would err in its use, the most common error being a properly shackled transmission one minute, followed by the same numerals in the plain the next. Frequently impromptu calls would be compromised by the actual name of the ship being used inadvertently. These violations, along with the placing of matter on circuits which should never appear in the plain, would appear to be directly the result of not writing out and properly phrasing a message prior to its transmission. In the same connection, plain language transmissions were often made on various channels, followed shortly by encoded despatches nearly word for word the text of the plain. Usually, too, the plain voice transmission would end with the phrase "despatch will follow", alerting enemy intelligence to a linkage between voice and encoded traffic. It would seem that the speed considerations were seldom so great but that the encoded despatch alone would have served adequately.

*SHIPBOARD FACILITIES and THEIR USE*

*CTF 51 comments and recommends:*

1. New antenna arrangements improved performance of equipment in the ROCKY MOUNT. Basically, transmitting antennas are now well aft and are short, while receiving antennas are forward. Interference has been much reduced. It will probably not be completely eliminated as long as we must handle so many signals in so little space. Constant care is necessary in turning and adjustment and in the selection of equipment in proper locations for certain frequencies in order to minimize this difficulty.

2. Rearrangement of voice circuit equipment would be desirable in many transports. Special arrangements were made for communication facilities in control craft, and consideration is now being given to various problems, including communications, of this type of craft with a view to their improvement.

3. Coding and message-center space was adequate in the headquarters ship for the available personnel. More personnel and more space could have been very profitably used.

*SMALL CRAFT AS COMMUNICATION RELAY STATIONS*

*CTF 52 recommends:*

In plans for unloading and consolidation, and even for assault if necessary, include assignment of small craft as communication relay stations where forces are separated by appreciable distances along a coast, around points of land, or on opposite sides of mountainous islands.

*TCS JEEP-MOUNTED for SENIOR BEACHMASTERS*

*CTF 52 recommends:*

Provide a jeep-mounted TCS for senior beachmasters when they must communicate with other senior beachmasters or vessels between beaches separated by a considerable distance.

*TRAFFIC LOADS & EMPLOYMENT OF CIRCUITS*

*CTF 51 comments and recommends:*

1. Traffic was fairly well distributed among the various CW circuits.

2. The Task Force 52 Common was used for partial FOX broadcast of a great deal of local traffic, but also handled an R-method load and was not at any time used as a "FOX Broadcast" in the usual sense, that is, with serially-numbered messages. Traffic was heavy on this circuit from the breaking of radio silence on D-day until the completion of the TINIAN operation. It was used not only as a tactical circuit, but to some extent as a "ships present" circuit, taking a load which might well have been assumed at an earlier date by the regular local harbor circuit on 355 kcs.

3. Task Force 53 used the Task Force Common 469 kcs as a regular FOX broadcast with considerable success. It has been suggested by other echelons that there should be available both a low-frequency common for R-method and a machine-keyed FOX low-frequency broadcast by the Task Force Commander. The suggested circuits would be of value if frequencies, operators, and equipment were available.

4. The Task Group Commanders circuits (2032 kcs and 2170 kcs) were also busy. In addition to their designed purpose, they cared for certain small-craft who could not use 441 kcs. Considerable ship-shore traffic was handled with shore headquarters over these circuits.

5. The Task Force Commanders circuit (4420 kcs) remained at a reasonably high state of efficiency throughout. There were few delays, answers were usually prompt and operation good. This circuit is considered to have been greatly improved over previous operations.

6. Long-range point-to-point service was good over several circuits. The direct circuit to NPM took most of the load with high efficiency. Continuous contact was maintained and traffic was handled at high speed. There were occasional lapses of circuit discipline which, however, in no way impeded efficiency in traffic handling since only two stations were on the circuit.

7. Attention was called by dispatch to a tendency to use forward area point-to-point circuits for handling "through" traffic to rear areas. Traffic should be allocated to those circuits best able to handle it in view of the overall picture. Poor circuit discipline also influenced traffic jams on the forward area point-to-point circuits with a number of stations thereon. Mention has already been made of relaying difficulties with shore stations at Marianas objectives.

8. More thoughtfulness is needed on most voice circuits. This applies not to the use of "please" and "thank you" (which are out of order and should never be used), but to "allowing the other fellow a chance." Too often a transmission is broken in on before it can be receipted for, resulting in confusion when the later receipt is given. It should be understood by all hands that, except in emergency or for traffic of higher precedence, a circuit is not clear for new traffic until the sign-off "OUT" has been given by those already using it.

9. The TBS has been reduced by use of the SCR 608-610 equipment, but as already mentioned this is not a completely satisfactory substitute. If dual receivers and push-button-shift transmitters can be provided in the TBS range or higher, they will be a great improvement.

10. The only noted attempt at jamming was on the Local Air Warning circuit, and it was brief. This circuit functioned satisfactorily, although there was considerable difficulty in lining up radar guardships on several occasions. Little use was made of the Fleet Air Warning until the Local was secured, when it took over the ASP load.

11. The local harbor circuit, 2718 kcs., was overloaded as usual, but served satisfactorily in spite of difficulties. It became the harbor Air Warning upon securing of 3465 kcs. late in the consolidation phase.

12. Previous discussions of circuit discipline have concerned themselves primarily with careless

COMMUNICATIONS *(Cont.)*

or ignorant errors. A new and serious problem of discipline arose in this operation with the deliberate flouting of regulations by voice operators who used the circuits, usually at night, to broadcast music, exchange personal conversation, "wisecracks", profanity and obscenity. Much effort, only partially successful, was expended in the attempt to apprehend the unidentified offenders. Close supervision of operators and circuits by officers in all ships is required. Home-made DF apparatus was constructed, and personnel were employed for many nights in "detective work". It may become necessary to provide additional DF equipment to stop this unauthorized transmission. So far, little if any interference with traffic ha resulted, but this tendency must be stamped out before it gets a foothold. This is necessary not only because of its effect on communication safety and efficiency but also to support general morale and respect for constituted authority.

13. Besides the direct NPM circuit, some traffic was handled on the 4295 series but very little on the 4235 series. On many occasions the intercept watch on these circuits provided traffic some time before it was rebroadcast by NPM. Several times the headquarters ship, using "NDP9", answered NQO calls on 4235 series and relayed high-priority traffic which the originators would otherwise have been unable to deliver. The early establishment of the 4235 kcs ship-to-shore series ashore in forward areas is considered important.

14. Rebroadcast service by NPM was good on very high-precedence traffic. "Operational Priorities" were broadcast reasonably promptly, and the few "Urgents" sent by this command to NPM were usually being started out on the HOW FOX by the time transmission to NPM was completed. An improvement should be made in the time of delivery of Priority and Routine traffic. The handling of Deferred messages has degenerated to a point where air-mail is quicker.

15. On voice circuits there was the usual tendency to use the handiest circuit, resulting in overloads for the more popular ones. This was not so marked as formerly, however, and it is believed that progress is being made toward educating personnel in the proper "functional" use of the various circuits. More thorough briefing of supervisors, preparation of circuit charts, etc., will aid in this regard.

16. The purposes of the various voice circuits as listed in the communication plan are self-explanatory. It is to be noted, however, that the LF and MF CW circuits were not used as much as they might have been for their designed administrative purposes, which would have partially relieved the voice load.

17. Voice circuit discipline was somewhat improved on some circuits. This is something that must be continually watched. No one should be allowed to use a microphone who is not properly trained in voice procedure. It is suspected that a large part of the trouble in this respect is caused by officer talkers. Proper voice procedure is simple to learn and use, and it must be insisted on in all commands. Great improvement will result from the adoption of the attitude that voice circuits, like CW circuits must "*transmit dispatches*", not "*hold conversations.*" The exact transmission must be decided on, and preferably written down, before it is commenced.

CONTINUATION OF FIRES

*CTG 53.2 concludes:*

If fires are to be continued after How Hour, extreme caution must be exercised to avoid blocking in the troops and stopping the impetus of the initial assault. It is evident that fires to some definite extent must be extended beyond How Hour in order to assist in the neutralization of mortar fires.

COORDINATION WITH AIR SUPPORT

*CTG 53.2 recommends:*

That closer liaison be developed between air and gunfire support parties, or the combining of both jobs into one party in order to achieve coordination ashore.

That further measures of coordination be worked out afloat so that split-second checking and resuming of fire be achieved.

ENEMY'S FAILURE TO USE SHORE BATTERIES AGAINST SHIPS

*CTU 53.5.3 comments:*

1. Without conjecturing on possible reasons for the enemy's failure to use their numerous guns on GUAM against transports and fire support ships, we should not assume that this will always be the case. At SAIPAN, batteries which this unit had passed several times within 5,000 yards opened up on another unit at dusk. Similarly, at dusk, brisk mortar fire was delivered at LST's and other craft off Asan Beach, Guam, after a day's inactivity. The preliminary bombardment of Guam was unusually long (two weeks) - perhaps the Japs played 'possum until it was too late and many or most of their guns were destroyed.

ENEMY'S FAILURE TO USE SHORE BATTERIES AGAINST SHIPS *(Cont.)*

2. Another point, related to the above, is the tendency of personnel aboard ship to gather on the engaged side for sightseeing, and of personnel remaining on the disengaged side to relax. Vigilance of all personnel, particularly battery crews, on disengaged side must be maintained, otherwise a low-flying plane, or submarine torpedo, may approach unnoticed.

FATIGUE - REDUCTION OF

*CTU 53.5.3 comments and recommends:*

On occasions, ships were required for call fires and deep-supporting missions during the daytime and harassing or neutralization missions at night. In some instances, this extended over a period of several days. In order to reduce the fatigue which this schedule engendered, the Task Unit Commander organized the firing ships into two groups for night missions - one group firing each night, the other group standing by subject to emergency calls. Commanding Officers can do much to help this situation by prescribing conditions of readiness appropriate to the unusual circumstances, modifying standard conditions if necessary. Procedures must be devised to provide adequate ventilation.

FIGHTER COVER

*CTF 51 comments:*

The prompt supply to SAIPAN of Army day and night fighters was most helpful for troop support, and for day and night fighter cover. It is believed that the success of night fighters based ashore and on carriers was largely instrumental in inducing the enemy to discontinue his air attacks against the ships of the expeditionary Force and against our troops on shore.

BUT WITHOUT ADEQUATE RADAR CONTROL WHICH GREATLY REDUCED THEIR EFFICIENCY.

FIRE SUPPORT

*CTU 53.5.3 (Also 53.2.1) comments and recommends:*

1. The control of fire by the Fire Support ships appeared to be excellent. I was only able to observe the JOHN RODGERS direct but her firing left very little to be desired.

2. Immediate steps should be taken to have the 40MM guns of all vessels taking part in Fire Support tied in with the 5" director. For this purpose it is essential that this hook-up be made through the searchlight controls in order that the maximum use of this valuable weapon can be utilized.

3. For interdiction fire and harassing fire at night it appears to me that a single gun fired every twelve minutes would be more effective than a five-gun salvo fired once an hour.

4. For short-range firing, fire support ships should be trained to fire using director train and pointer elevation. The use of full pointer fire is not recommended unless the targets can be definitely and positively identified.

*CTG 53.2 comments:*

Direct Control of Fire Support by CTG 53.2 was exercised in the use of LCI(G) and two destroyers, RINGGOLD and JOHNSTON. It was mainly used against enemy in the cliffs along the south edge of OROTE and was effective in keeping down fire against the beaches and the LST's. The difficulty experienced was with the line of fire to keep the target bearing line in such a direction as to prevent ricochets or duds from landing in our own troops. Neutralization and destruction were achieved by both destroyers and LCI(G)'s on NEYE ISLAND, but for areas on the northern side of OROTE PENINSULA such neutralization was impossible at night due to troop front lines and inability to locate the enemy gun firing. Starshells and harassing fires did assist in this. The closing of LCI(G)'s with enemy batteries on NEYE ISLAND and vicinity was performed expeditiously, and the mission was performed with much credit due these craft, as they drew heavy enemy fire and suffered proportionately heavy casualties.

*CTG 52.2 comments and recommends:*

*AMPHIBIOUS GUNFIRE OFFICER GROUPS AVAILABLE FOR TEMPORARY ASSIGNMENT*

The SAIPAN operation required a continuous watch, day and night, on the naval gunfire control (common) circuit for a period of 24 days. Future operations may also require this. Present amphibious group staffs do not have sufficient officers with gunnery experience to conduct an operation of the magnitude of SAIPAN. At least four officers are considered necessary for proper control of naval gunfire of such an operation. Inasmuch as this number of gunfire officers is required only during the control of gunfire in an assault operation, it is recommended that one or more groups of two or three experienced amphibious gunfire officers be established and made available for temporary assignment to the staff of the amphibious group commander assigned to control naval gunfire support.

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## FIRE SUPPORT *(Cont.)*

*BATTALION SPOTTERS and NGL OFFICERS VISIT SHIPS*

The continued regular visits of all battalion spotters and naval gunfire liaison officers to each type of ship likely to be assigned, will prevent many of the common misunderstandings between these officers and ships assigned direct support duties. Each must know the other's problems in order to achieve the maximum support.

*COUNTER-BATTERY FIRE*

Counter-battery fire from designated ships to search thoroughly and continuously for enemy gun flashes is recommended. Naval gunfire by these ships would necessarily have to be coordinated with the deep support of aircraft and should be fired from ranges to insure a maximum ordinate which would not interfere with aircraft strikes.

*FRONT LINE INFORMATION ON FIRE SUPPORT SHIPS*

All fire support ships must keep up-to-date information on the location of the front lines of all units ashore, preferably on a situation map in CIC and on the bridge. With larger land areas and larger landing forces, it may occur that a ship supporting an assigned battalion will fire over or into own troops in other units unless the front line situation of all units is known and the ship intelligently positioned for delivery of fire requested.

*NAVAL GUNFIRE CONTROL*

As the size of landing forces in amphibious operations increases, the problem of naval gunfire control becomes increasingly difficult. If the initial landings are made on one beach, it will continue to be essential that one officer control the close supporting gunfire regardless of the strength of the assault force or width of beach. If simultaneous or nearly simultaneous landings are to be made at widely separated points, a separate officer will be required for control of the supporting fire for each. A single common frequency cannot efficiently handle the load for control of supporting gunfire of more than three divisions. An operation involving more than three divisions will therefore require adtional gunfire common frequencies. If the supporting fires of more than three divisions must be coordinated because of divisions operating in the same general area, this must be done by one officer whose flagship and staff are equipped to handle two or more common frequencies simultaneously and coordinate the entire support at one station within the coordinating and controlling officer's flagship. This, of course, will require additional communication channels and a larger naval gunfire control staff, but is believed to be the only efficient solution for rapid and efficient coordination of support for a large landing force.

*PROWLER AIRCRAFT*

It is recommended that prowler aircraft orbit over the entire area to deliver strafing, bombing, and rocket attacks on any indication of enemy activity or fire. This avoids the necessity of accurately locating a target for counter-battery naval gunfire, since the pilot attacks what he sees without reference to target maps.

*STANDBY FIRE SUPPORT SHIPS*

After the landing has been accomplished, it will be found advisable to keep a ship standing by in likely locations for the delivery of counter-battery, harassing, or special mission firing. These standby ships must not be assigned to support any shore fire control party. Failure to provide ships for this specific duty makes it necessary to interrupt a ship delivering direct support on call to provide emergency fire, and results in confusion.

*CTF 53 comments:*

*Fire Support Areas* - Fire support areas were drawn up to station ships in such a manner as to afford maximum protection for the assault waves. For instance in the north, Fire Support Area No. 3 with three cruisers protected the eastern flank of the landing area, while two battleships in Fire Support Area No. 1 protected the western flank. Close-in Areas No. 5 and 7, each containing two destroyers, permitted cross fire on the most threatening areas (ADELUP POINT and ASAN POINT), followed by flanking fire on the same POINTS. The transport areas, LST initial area, LST launching area, line of departure and boat lanes, were placed between the fire support areas so that maximum protection would at all times be afforded.

As far as can be determined, the assignment of fire support areas caused no difficulty. There were no reports of ships firing into each other by direct or ricochet flight and no reports of groundings or other embarrassments caused by the size of the fire support areas.

*Fire Support Teams* - In order to have ships continuously available for call fires and to permit them time off to replenish ammunition, rest, etc., two fire support teams were set up for the Northern Attack Group. One battleship and two destroyers constituted one team on the western

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FIRE SUPPORT *(Cont.)*

flank of the area in which the Third Division landed, while one cruiser and two destroyers formed the team on the northern flank of that area. The tour of duty was for a twenty-four-hour period commencing at 0700 daily. All battleships and cruisers (two of each) remained in the area daily, ready to answer requests for fire, while the destroyers relieved at 0700 departed to replenish ammunition. Late in the afternoon the team not on duty (one battleship, one cruiser and two destroyers) made the night retirement. Later, all ships of both teams remained in their assigned areas nightly and did not retire, but stood by to answer requests for fire. One heavy cruiser (MINNEAPOLIS) was kept in reserve and retired every night while she delivered fires all during each day. On the occasion of major movements by troops or when requested by the troops for any purpose, any or all of the relief team plus the reserve cruiser were kept in the area for use as required.

FIRE SUPPORT LOGISTICS

*CTF 51 comments:*

A continuous program of refueling, reloading ammunition, disposal of empty cases and replenishment of provisions was maintained throughout the operation. Ammunition resupply has been previously discussed in some detail. The other logistic operations were conducted by the Screen Commander and by CTF 52. CTF 52 arranged for and made facilities available, and the Screen Commander arranged for relief from screening assignments, fire support assignments, patrols, etc.

The Screen Commander (Commander Destroyer Squadron 56, relieved occasionally by Commander Destroyer Squadron 53) deserves much credit for the able manner in which he apportioned the available destroyers to meet the many tasks required.

FIRE SUPPORT UNITS

*CTU 53.5.3 comments and recommends:*

Familiarity with terrain in target areas is of considerable importance both in preliminary bombardments and in fire support missions. CALIFORNIA'S report indicates difficulty of air spotters in identifying targets located in wooded or hilly areas, or which are well camouflaged. The same difficulty is experienced in locating targets near beaches by direct observation from the firing ship. Ships which worked over the same area for several days, however, had less difficulty in locating targets reported on intelligence charts and usually uncovered additional targets. This emphasizes the desirability of changing the organization of fire support units as little as practicable, and of keeping units in same operating areas, to the end that individual ships may have maximum opportunities to study target areas.

*CTG 53.2 comments:*

Initially, three fire support units were set up. This was cut down to two groups by combining Fire Support Units 2 and 4. Rotation of ships within the group for rest, ammunition resupply, etc., was accomplished by CTG 53.2 to the maximum extent possible, but, due to the need for heavy-caliber fire on OROTE PENINSULA, the cruisers and battleship were in use the major portion of firing time. No set schedule for relief or replacement was made, therefore, and changes were based primarily on ammunition on hand and the tactical situation. During night firing there were always heavy-caliber ships in reserve if required. Destroyer relief was maintained fairly constantly. Fire support areas were delimited and ships placed to achieve maximum effect without regard to boundaries after William plus one day. In announcing scheduled or night fires, all ships were advised of the general location of each other support ship. The screen assigned to F/S Units was placed under CTG 53.5 on William plus one to allow complete coordination of the supporting ships screen and the transport area screen. Thereafter, details of screening assignments were handled by CTU 53.2.1 for CTG's 53.5 and 53.2.

HARASSING FIRES

*CTF 51 comments:*

1. Heretofore, harassing fire has been successfully employed against small atoll islands over a relatively short period of time during which ammunition supply was not a very serious problem. In spite of the large land mass at SAIPAN and the necessary limitation of ammunition expenditures because of the duration of the assault and the difficulty of replacement, good results were obtained by harassing fire. Particular attention was given to known enemy concentration points and lines of communication and supply to prevent movement of reserves, movement of supplies, and the dissemination of information vital to the enemy in organizing his forces for defense. Evidence of the success of our fire has been supplied by P.O.W. reports giving the difficulties the enemy had in moving troops and supplies, and in reorganizing troops for defense, even in the rear areas.

2. TINIAN TOWN was harassed nightly throughout the operation, and intermittent star shells were placed over SUNHARON HARBOR to prevent enemy water

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HARASSING FIRES *(Cont.)*

movements. The USHI POINT Airfield on TINIAN was also harassed nightly, to deny it to enemy use. After repeated air alarms, a program was instituted of harassing both TINIAN fields and the MARPI POINT field during periods of red and blue alerts. Several enemy planes were destroyed by this fire and it is believed that landings and take-offs were prevented.

HARASSMENT - TINIAN

*CTF 51 comments:*

1. During the operation against SAIPAN, counter-battery and harassing fire were delivered at TINIAN. The inclusion of TINIAN in the Dog minus two, Dog minus one and Dog day bombardment plans has already been mentioned. TINIAN was also continuously patrolled to prevent enemy escape by water. One destroyer was stationed nightly in the SAIPAN Channel with the dual mission of counter-battery against shore batteries on TINIAN and harassment of the North TINIAN airfield to deny it to enemy planes during all alert periods. TINIAN TOWN and SUNHARON HARBOR were harassed nightly by vessels from the southern portion of the transports screen. The ships designated for this task also performed the task of harassing the GURGUAN POINT (central) Air Field during alert periods. Air bombardment was carried on daily.

2. Due to the shortage of destroyers, the last-mentioned task of harassing and bombarding TINIAN TOWN was generally assigned to DEs, APDs, AMs, and DMSs. These vessels apparently welcomed the change from the usual monotony of screening assignments, and uniformly performed their tasks in an admirable and enthusiastic manner.

INCENDIARY BOMBS

*CTF 52 recommends:*

After a town area is damaged by gunfire and demolition bombs, use incendiary bombs of the latest type available to complete its destruction by fire.

JOINT OPERATIONS CONTROL

*CTG 53.2 comments:*

It is felt for the GUAM operation the control set-up on GEORGE CLYMER, though restricted and with inadequate space, was ideal inasmuch as it permitted practically instantaneous transmission of all gunfire traffic of CTG 53.2 by voice. Further, the maintenance by the Intelligence Section of a joint air, gunnery, and intelligence map enabled the highest degree of coordination.

*CTF 53 comments:*

Coordination between the Task Force Gunnery Officer, the Support Aircraft Commander (Force Air Officer), Task Force Operations Officer, Landing Force Operations Officer (C-3), Landing Force Naval Gunfire Officer, and Landing Force Air Officer was maintained throughout the operation. These officers dealt directly with the Task Force Commander and the Commanding General and their respective Chiefs of Staff. Detailed information and intelligence were available through teletype screens and teletype repeaters upon which all messages were reproduced. In this manner, all sections were kept informed and coordinated throughout the operation. Selected information, in turn, was passed to participating units. The naval gunfire set-up in the Joint Operations Room of the headquarters ship included a section of blackboard on which the names of all fire support ships, support areas, support assignments, targets, ammunition on hand and ammunition expended were available. A large map of the fire support areas and objectives was maintained, in immediate conjunction with the landing force situation afloat and finally ashore. One remote control radio to the naval gunfire common channel was available and utilized directly from this room. This Northern Attack Group Naval Gunfire Common was manned by an assistant gunnery officer at all times during the operation. One chief yeoman was available for clerical assistance required by the operation. A listener-typist was placed on the receiver to log all messages heard on the circuit.

The Task Force Gunnery Officer remained with the Task Force Commander on the flag bridge during the assault. Battle telephone and ships service telephone communications with the Joint Operations Room, where the naval gunfire common circuit was actually manned, made it possible for decisions affecting naval gunfire to be considered and acted upon without delay. Throughout the assault it was always possible for the Task Force Commander to control the commencing and ceasing of fire of the fire support ships with promptness and certainty.

The naval gunfire common for the Southern Attack Group was manned continuously in order to be alert for requests for assistance from the Commander of that Group or for the receipt of reports concerning naval gunfire in the South.

LIAISON OFFICERS
(Also see SHORE FIRE CONTROL PARTIES)

*CTG 53.5 recommends:*

That experienced Naval Liaison Officers be attached to divisional headquarters of amphibious

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**LIAISON OFFICERS** *(Cont.)*

troops in order to further exploit naval gunfire in support of shore operations.

*CTF 51 comments:*

Divisional and Corps Naval Gunfire Liaison Officers did excellent service in coordinating the activities of Shore Fire Control Parties. During the first two days, prior to the establishment of rear echelons of command ashore, requests for fire support ships were submitted directly by Regimental Liaison Officers who, naturally, had no way of comparing the urgency of their needs with those of other regiments. It was difficult to arrive at proper priorities when all requests could not be met. Coordination of requests was taken over by the Division Liaison Officers for units under their command and later by the Naval Gunfire Officer, Northern Troops and Landing Force, for all units with very successful results.

**LOGISTIC RECOMMENDATIONS**
**(Also see FIRE SUPPORT LOGISTICS)**

*CTF 51 comments and recommends:*

1. In future operations, where a large number of destroyers and diesel-burning craft are used constantly, it is essential that large amounts of lube oil of the common symbols be carried on board tankers scheduled to arrive at the objective, or be brought forward in garrison shipping due to arrive not later than D/20. In addition, LSTs which have bulk stowage for lube oil (Symbol 9370), used in large quantities by DEs and other large diesel craft, must be cautioned to carry a full load of this oil, as its availability aboard fleet tankers is limited. Finally, before a ship leaves a rear area for a combat zone, the commanding officer should insure that it is provided with lube oil which is new and clean enough so that the ship will not suddenly require large amounts of lube oil for a complete change of oil shortly after arriving at the objective. A little forethought in such matters would have considerably lessened the drain on lube oil facilities.

2. It is felt that the problem of supplying fresh and frozen provisions on long operations is far from solved and that forthcoming operations, which are to be considerably longer and larger in scope, will render this problem acute. Furthermore, the currently available dry stores are considered to be incomplete in items which might be used as substitutes for fresh and frozen provisions Two solutions to this problem are suggested, and both require early consideration:

(a) The number of refrigerated provison ships in the Pacific area must be augmented to the point where at least two, and preferably three, are available to follow the assault forces and, by a rotation system, keep them supplied with frozen and, if possible, fresh provisions for a period of several months.

(b) If this is not feasible, serious attention must be given at the earliest possible moment to a study of the present "balanced" issue of dry stores, with an eye to revising the list in favor of much higher percentages of canned fruits, fruit juices, vegetables, dehydrated potatoes, and other items which may be substituted for fresh and frozen provisions.

3. Sooner or later in an operation conducted for long periods far from our own bases, the water shortage reaches an acute stage. In this operation it came late; in the next one, with many more ships and men to be supported, it is bound to come earlier. Since a severe shortage rapidly appears even when all sources present are utilized to the utmost, as they were in this operation, it will not be sufficient to say "the transports will supply the small craft with water". There appears to be but one solution - water ships must be moved to the assault area closely following the assault forces, prepared to supply large amounts of water until water barges can be brought into the area. The assignment to the assault force of a Liberty type tanker, built as a water ship, would be of great assistance in handling this situation.

**MAPS, CHARTS, PHOTOGRAPHS, & INTELLIGENCE MATERIAL**

*CTU 53.5.3 comments and recommends:*

The target maps supplied were in general excellent. The system of numbered 1000-yard squares, subdivided into 200-yard lettered squares, provided a quicker method of locating targets than the conventional grid system, and with less chance of error. However, a map or chart may have so much printing on it as to tend to defeat its purpose. For instance, clearly printed contour lines are of great help to air spotters and to gunnery officers. On the target maps furnished, these lines and the intervals were often obscure or at best made difficult to read by other printed matter. It is believed that the charts could be simplified and made easier to read if the 200-yard squares were not lettered. One 1000-yard square on each map, with sample lettering of the 200-yard squares, would be sufficient. It is also recommended that the boundaries of the 1000-yard squares be made more distinct.

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## MAPS, CHARTS, PHOTOGRAPHS, & INTELLIGENCE MATERIAL *(Cont.)*

*CTG 58.1 comments and recommends:*

1. Although undoubtedly complete for its purpose, the intelligence material supplied by the FIFTH Amphibious Corps was of little value for carrier work. It did, however, establish the use of one common grid for all units involved in the operation which was of great value in the simplification of reports.

2. The large special Air and Gunnery Target maps were too cumbersome for carrier use, but the smaller 8 x 8 grid book sheets were referred to constantly. However, these sheets could not be used airborne, and a simple grid based upon the master was devised for plotting board use and reprinted at sea for the use of all ships and aircraft of the Task Group.

3. No good mosaics of the MARIANAS were supplied. Mosaics are most useful in briefing pilots and are desired where available for future operations. Mosaics supplied for the MARSHALLS operation should serve as a model for the type desired in the future.

4. It is recommended that in future operations a Naval Air Combat Intelligence Officer with recent carrier experience be delegated to supervise the preparation of the data for use of carriers and carrier aircraft.

5. Material should be supplied that can be worked on and penciled. It is important that size be practical. Lack of such material caused a severe strain on printing facilities at sea. ComTask Group 58.1 had 34 different charts printed in quantity at sea for ships and aircraft of this group. Samples of this material have been forwarded to the Operational Information Section of ComAirPac.

6. Adequate vertical, oblique, as well as mosaic photographs should be supplied in sufficient quantity for Ready Room use. Ten copies for CV's and five for CVL's should be ample.

*CTF 52 recommends:*

Whenever clear low oblique and vertical photographs can be obtained, these should be overprinted with thin white lines delineating the target square system. The photographs should be issued to fire support ships and aircraft for greater facility in identification of land areas. It is not desired that photographic target maps replace the topographic target maps which were used in the MARIANAS campaign; these are considered superior to any type of target map previously issued and should be made standard. Certain features of terrain such as cane fields, wooded areas, and other prominent natural objects cannot be shown on the topographic target map. Photographs issued with target square overprint should not be congested with overprints of standard symbols of installations.

*CTF 53 comments:*

The charts were generally excellent except that those having small 200-yard squares overprinted were such a mass of detail that they were difficult to read. It would have been better if all individual 200-yard squares had not been lettered. A single sample 1000-yard square lettered A,B,C, etc., would have been ample, since all are identically lettered.

Charts showing fire support areas, transport areas, boat lanes, lines of departure, M square grid system, etc., were printed in APPALACHIAN for Task Force 53. Included upon these charts were arbitrary one-syllable named areas such as "Buck", "Ralph", "Dick", "Bert", etc. Each of these arbitrary areas represented special areas requiring attention before the troops could be landed. It was very convenient to designate the actual landing beach in the North as "Ralph". This included the Red No. 1, Red No. 2, Green, and Blue Beaches, ADELUP POINT, ASAN POINT and an average distance of 750 yards inland from the actual beaches. The threatening areas on either flank were called "Bob" and "Bert". Similar areas were outlined for all the vital areas to the North and South including CABRAS ISLAND and OROTE PENINSULA.

*CTF 51 comments and recommends:*

1. The special grid system proved highly successful because of its simplicity and the logical manner in which it was developed from the standard grid system. Grid coordinates were used on very few occasions. An additional advantage of the system was discovered during the operation when a copy of the special target Map was captured by the enemy. Thereafter, all target numbers were "shackled", using the prescribed shackle code for the day. Target numbers lent themselves to "shackling" with much greater ease than would have been the case with grid coordinates.

2. It is recommended that the present system of having the Force Intelligence Officer coordinate all requests for maps, charts, etc., that are to be constructed and printed by JICPOA be maintained.

3. It is recommended that the distribution of all basic intelligence material such as charts,

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## MAPS, CHARTS, PHOTOGRAPHS, & INTELLIGENCE MATERIAL *(Cont.)*

maps, and air target maps (small) be made directly to all ships and units of the Joint Expeditionary Force by the Force Intelligence Officer. The amounts to be distributed to the various ships and units should be by agreement with the Group Intelligence Officers. The distribution of other material on individual objectives should be made by the Groups themselves.

*CTF 58 comments and recommends:*

1. It is recommended that CV's be provided with 10, and CVL's with 5 copies of all photographs that are issued for pilot study for specific operations.

2. It is recommended that grid type target maps be standardized so that the pilots and ships will have a uniform system for designating targets in all operations.

3. It is recommended that a uniform grid system be used for designating air and gunnery targets, although it is not necessary for the air and gunnery target maps to be the same map.

4. The blue folders of air target maps furnished for the operation were not satisfactory for air use, and many air groups used makeshift maps prepared on their carriers.

5. Charts, intelligence data, etc., should be supplied not only to carriers but to every ship in the force, in order that effective bombardment may be conducted on targets without the necessity for supplying target information just prior to bombardment. It has been necessary for the carriers to duplicate as far as possible charts, etc., for use by surface ships. This material should be supplied as early as practicable and then additional information furnished by which it can be kept up to date.

6. Intelligence material, charts, etc., even though incomplete should be supplied to all ships for all targets which may be hit and not limited to targets which are scheduled to be hit in the beginning of the operation. Such material must then be kept up to date. At the moment all ships should have information on the PHILIPPINES, FORMOSA, the BONINS and JAPAN as well as our next objective.

## MILITARY PERSONNEL

*CTF 51 comments:*

The Force Commander cannot close without expressing his sincere respect and admiration for our military personnel of all services and arms, for their eagerness to close the enemy; for their magnificent courage when in the presence of the enemy; and for their skill and determination in overcoming him. They are cheerful in adversity and ingenious in surmounting difficulty. The weapons they are provided with are excellent, and stand up well under prolonged use. Our planes, tanks, guns, trucks, and ships-- and above these things our men--are all a sturdy lot.

## NAVAL GUNFIRE

*CENTRALIZATION OF CONTROL*

*CTG 53.2 comments:*

Centralized control by CTG 53.2 during Phase I was essential because of the tactical situation. It proved valuable in achievement of the maximum use of naval gunfire with the maximum coordination.

*EFFECTIVENESS*

*CTG 53.2 comments:*

Due to the extensive use of air and artillery, it is not believed possible to make specific estimates of effect of naval gunfire. It is to be noted, however, that the casualties suffered by our troops in the initial landing were extremely light. The majority of credit for this is believed due to naval gunfire. The Regimental Commander of the 4th and 22nd Regiments expressed great pleasure with its effect and also that it had exceeded their expectations. The Brigade Commander was highly pleased with its efficiency and claimed the starshells saved many lives. The dependency of the troops on naval gunfire is best illustrated by the expenditures of ammunition during Phase I. Many direct hits were reported on enemy installations of all types and upon completion of Phase I it has been reported that no naval shells other than starshells landed in our own troops in the Southern Area; this includes ricochets. It is further believed that the four scheduled bombardments coordinated with the attack of the troops on OROTE PENINSULA proved of great support to these attacks.

*CTF 53 comments:*

The assault troops of both the Third Division and the First Brigade landed with very little interference or opposition from enemy troops and

with sporadic mortar fire as the only enemy gunfire to hinder them. This feat was due in large part to the intense naval gunfire placed upon the landing beaches and adjacent areas just before the Marines first set foot on the beach. Coastal defense guns, heavy and light AA guns, dual-purpose guns, and all types of defensive installations were rendered impotent prior to the landing of troops. Most of the houses and other structures on the west coast of the island were completely razed by deliberate destructive fire, which prevented their use by enemy troops.

It is believed that not one fixed gun was left in commission on the west coast that was of greater size than a machine gun.

*CTF 51 comments:*

1. Many enemy installations were in caves and dugouts which presented poor targets for naval gunfire. However, many emplacements were shelled and destroyed regardless of ammunition expenditures. Effective and extensive use was made of air bursts against troops in the open, when ships were careful to keep them *LOW*. All types of fire, even when failing of destruction, was of value in forcing the enemy to abandon natural defensive positions, in stripping off camouflage, in keeping the enemy in caves and ravines and preventing movement.

2. The disruption of communications by naval gunfire and field artillery was a major factor in the final enemy demoralization. Similar chaos was created in enemy supplies. Many small scattered dumps were destroyed and use of normal routes was denied the enemy.

3. Cane fields and brush afforded the enemy valuable concealment. Cane was burned with reasonable success by White Phosphorus projectiles. Some similar success was reported from the use of star shells burst at a low height, and from 40mm. As none of these were completely effective in burning brush, jettisonable gas tanks filled with a mixture of napalm and gasoline, which was highly effective, were dropped.

4. Beside the usual destructive effects of bombs, aircraft rockets contributed to the air bombardment effort. Aircraft rockets were of great value in hitting small targets such as tanks. Movement of tanks was observed from the air and tank counter-attacks broken up with rockets.

5. A concise summary of the effect of Naval Gunfire (although exaggerated) is found in the following extract from a captured message transmitted by enemy headquarters on SAIPAN:

> "...The practical experience of the defense forces of SAIPAN in this battle lasting over half a month lay in the power of the enemy naval bombardment. If there just were no naval gunfire, we feel we could fight it out with the enemy in a decisive battle...."

*NIGHT MISSIONS*

*CTU 53.5.3 comments and recommends:*

During most of the period subsequent to W-day, ships of this unit worked in close support of the Third Marine Division. Initially, for night missions, the Task Force Commander or the Unit Commander informed the Commanding General the names of ships available for missions each night, after which the Commanding General designated targets and assigned targets to individual ships. The Task Unit Commander kept the General informed of ships' positions. On several occasions, however, ships were unable to fire at assigned targets without endangering other ships in the vicinity. Furthermore, lines of fire to assigned targets were sometimes such that ricochets would endanger our troops. Investigation disclosed that the Command Post ashore was often in exposed advanced positions where it would be imprudent to strike a light. Consequently, it was sometimes impossible for the control parties ashore to consult their charts - they had to rely on memory for ships' locations. The obvious solution to this difficulty was for the Unit Commander to assign the targets which the General desired covered to the various ships. Upon suggestion of the Unit Commander, this procedure was approved by the Task Force Commander and thereafter adopted.

Based on the experience in this operation, the following procedure for night harassing or neutralization missions is suggested:

1. In the late afternoon, the Command Post ashore transmit the following information to the Fire Support Unit Commander:

   (a) List of targets to be fired upon;

   (b) Position of front lines (to be supplemented by later information, if available);

   (c) Nature of fire desired - whether harassing, neutralization or interdiction; desired allowance of each size projectile;

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(d) Nature of targets, (since this may govern type and size of projectile and type of fuze);

(e) Special information, such as large enemy troop concentrations or movements, mission of own troops, etc. This data may have to be sent over circuit more secure than gunfire common.

2. Upon receipt of foregoing information, the Fire Support Unit Commander station his ships and assign them targets, taking into consideration most effective lines of fire, effect desired by forces ashore, safety of own troops and ships, capabilities and limitation of ships' batteries, and ammunition available in particular ships. Fire Support Unit Commander prescribe ammunition allowance, taking into consideration missions assigned ships and total ammunition available in area. Lines of fire to be selected insofar as practicable so as to parallel our front lines, thus enfilading enemy positions while at the same time ensuring that ricochets fall in enemy territory.

Since the foregoing is effected by means of gunfire common voice circuit, the Task Group or Task Force Commander, as the case may be, is apprised immediately of details of proposed operations for the night and is thus enabled to make such changes as he sees fit.

A modification of this procedure was found practicable even in the case of call fires. On several occasions, Shore Fire Control Parties requested ships to carry out missions at night which were not feasible - once because of range limitations and on other occasions because adjacent ships would have been endangered. To eliminate this difficulty, an arrangement was worked out whereby the Command Post transmitted to the Unit Commander an approximation of the shore areas controlled by the various NLO's and SFC's, and the Unit Commander then assigned ships to NLO's and SFC's based on their locations in respect to the ships.

In order to reduce transmissions on gunfire voice circuit, all Fire Support Ships were required to copy target list originally transmitted by Commanding General. Then, when targets were assigned individual ships, each ship was required to read back targets assigned her (in shackle code). This check-back is recommended as a safety precaution, since a surprising number of errors were uncovered in this manner.

Sometimes in addition to front lines, the Commanding General prescribed a safety line - generally 1,000 - 2,000 yards ahead of the front lines. This is particularly desirable when position of the latter is not accurately known.

*PLANS*

*CTF 53 comments:*

The naval gunfire support plans were evolved after considerable study of available intelligence information and the desires of the troops being landed. Complete coordination was achieved between the Northern and Southern Attack Groups and the Division and Brigade respectively. The Support Aircraft Commander coordinated his plan with the Naval Gunfire and Landing Force Plans.

Separate gunfire support plans were prepared for the Northern and Southern Attack Groups. The Commander Northern Attack Group, who was also the Attack Force Commander, was to control the gunfire in the Northern Area (ASAN), while the Commander Southern Attack Group was to control the gunfire in the Southern Area (AGAT).

For the purpose of carrying out the gunfire plan for the Southern Attack Group, CTF53 transferred his Assistant Gunnery Officer to the staff of the Commander Southern Attack Group for temporary duty during the operation. A complete naval gunfire control center was set up on the Southern Attack Group flagship (GEORGE CLYMER) which functioned efficiently.

*RECOMMENDATIONS*

*CTF 53 recommends:*

1. That all fire support units be briefed in detail before proceeding to the combat zone. This is particularly important.

2. That fire support unit commanders and fire support ship commanding officers be given as much leeway as possible in determining the details of their scheduled fires. This includes caliber, rate of fire, and range to use.

3. That LCI(G)'s be used in all landings to precede and protect the assault boat waves. The use of rockets is particularly recommended since their psychological effect alone is tremendous. Their destructive effect has been well demonstrated. They should be used in close support of troops upon targets within range of guns and rockets, with illumination at night provided by destroyer searchlights or starshells.

NAVAL GUNFIRE *(Cont.)*

4. That all fire support ships be cautioned to base their close support not on the rigid time schedule (furnished as a guide only) but on the position of the leading assault boat waves. Fire should continue on the landing beaches until leading assault waves are 500 or 300 yards from the beach, depending upon whether the line of fire of supporting ships is respectively perpendicular to the beaches or parallel to them.

5. That air observers and close support destroyers report the position of assault waves so that supporting fires can be checked or lifted by the Task Force Commander in order to avoid firing into own boats, but at the same time to provide safe and effective support up to the last possible moment before troops land.

6. That regimental naval gunfire liaison officers, with their radio personnel and equipment, be assigned each regimental commander by the Attack Force Commander. These officers should assist in the training and equipping of the three shore fire control parties assigned to each of their regiments working in close cooperation with the landing force naval gunfire officer and with the Attack Force Commander's gunnery officer.

7. That destroyer gunfire be employed to keep the enemy awake and harassed during all the nights of the assault phase. Starshells should be fired to silhouette enemy movements and to confuse him, but should not be placed where they will interfere with own units; for example, demolition parties destroying beach mines and defenses.

8. That the Army type SCR-694 radio be substituted for the TBX and the SCR-284. This light, paratroop design SCR-694 radio is ideal for amphibious operations. Using the SCR-694, both the naval gunfire liaison officer and the forward observer would have the same radio equipment. A casualty to one would not interrupt the scheme of things. The other could immediately take over the functions of the casualty. They are trained to do just that.

9. That, if the SCR-694 radio be adopted, arrangements be made with Commander Central Pacific Force to assign a higher frequency to insure ability of SCR-694 radio to come up on it.

10. That commanding officers of ships be prepared to fight duels with shore batteries. The old adage that ships cannot engage shore batteries must be discarded once and for all. Ships must move in to extremely close ranges and must be prepared to lie to for hours in fire support areas. In order to do these things, the shore batteries should have been softened up and an adequate anti-submarine screen must be provided and organized.

11. That importance of coordination among air, naval gunfire and artillery liaison officers be stressed in order to prevent confusion on part of agencies delivering support.

12. That all fire support ships be capable of transmitting and receiving on both Naval Gunfire Common and shore fire control circuit at the same time. This is essential because fire support ships must be prepared to acknowledge for transmissions of control station during emergencies.

*CTF 51 recommends:*

It is strongly recommended that complicated coordination of gunfire and bombing by flares or other signals be avoided.

NAVAL GUNNERY
(Also see FIRE SUPPORT)

*CTF 51 comments and recommends:*

1. In amphibious operations, there are two major accomplishments required of bombardment weapons of whatever character:

(a) To destroy guns on shore that will prevent our transports from arriving in and remaining in the transport areas while landing troops and their equipment and supplies;

(b) To inflict sufficient damage on enemy defensive installations, weapons, and troops as to permit our troops to land and capture the position without unacceptable losses.

2. Whether we employ ships' gunfire, airplane weapons, or field artillery to accomplish these ends is a matter of indifference so far as the *purpose* is concerned. Each category of fire has its own points of excellence and weakness. All categories, however, are working to the same end. They are, in fact, complementary to each other, and all ought to be used in conjunction with each other for the solution of the same problem.

3. These principles are clearly stated in Circular Letters issued by the Commander Amphibious forces, and in SOP's issued by the Commanding General, Fleet Marine Force. But there have always been difficulties during planning and executing these expeditions in bringing the representatives of these three categories of destructive fire sufficiently close together to

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exploit the full capabilities of available weapons. Each group tends to go its own way, to the detriment of coordination. Intelligence organizations in all spheres also have a vital function to perform in supplying useful information to all.

4. When the planning for an operation first starts, it is essential that the topmost echelons of officers concerned with ships' gunfire, aviation support, shore artillery, and Intelligence meet in conferences, exchange views, and map out a cooperative and articulated major gunfire plan. The detailed plans of each must fit into, and together make up, the major plan, and without interference. Each individual plan should be checked by the representatives who are making the other plans. When placed in operation, the progress of the plans and their variations should be known to all. The continuous exchange of views and information, and agreements on allocations of scope and targets are required. Where possible, committees should meet daily to maintain cooperation and eliminate interferences.

5. In the SAIPAN and TINIAN operations better cooperative action occurred than previously. But there is still plenty of room for improvement, and efforts will continue toward that end.

### NEUTRALIZATION FIRE

*CTF 53 comments:*

A close study of information obtained from intelligence reports indicated that a softening-up of enemy defensive installations would be necessary, especially coastal defense guns, followed by close-range destructive fire by ships in conjunction with pinpoint bombing from the air. It was planned to do this neutralization and destruction prior to the arrival of the transports in the transport area. William minus Three, William minus Two and William minus One schedules of fire were therefore prepared by ComCruDiv-9 who was placed in charge of this program to be conducted in conjunction with the operations of the demolition teams. Actually the softening-up gunfire started on William minus Thirteen (8 July) when ComCruDiv-6 commenced this phase with CruDiv-6. Commencing on 14 July, ComTaskFor-53 in APPALACHIAN personally supervised the softening-up of the island of GUAM by bombing and gunfire. Coordinated ship and air bombardments were conducted daily and harassing fires conducted nightly together with starshell illumination.

In order to uncover all possible remaining hideouts for snipers and machine gunners, orders were given for heavy ships to close the range and destroy all houses and other structures in the towns of AGANA, PITI, TEPUNGAN, ASAN and AGAT. Battleships and cruisers, as well as destroyers, used pointer fire and direct spot to accomplish this mission.

All known enemy guns were given first priority and were hit repeatedly by gunfire in conjunction with air. It is believed that no fixed guns remained in commission for William Day.

### OBSERVATION PLANES

*CTF 51 recommends:*

That four observation planes per cruiser be provided on all heavy and light cruisers. That 25% spare planes be provided in advance area. Four planes were lost in the Marianas operation from 28 in use. Others were sufficiently damaged to be in need of replacement.

### OPERATING AREAS

*CTU 53.5.3 comments and concludes:*

1. Operating areas for this unit from 18 July through 21 July were prescribed by Commander Cruiser Division NINE and Commander Task Force FIFTY-THREE. These areas were in turn subdivided and maneuvers therein prescribed in Task Unit Instructions in order to provide suitable lines of fire at targets in assigned areas and to eliminate interference between ships. In view of small areas involved, it was essential that movements of ships be coordinated. On W Day, the requirements of Plan Victor (maximum range 7,000 yards) and the limits of Fire Support Area THREE made it necessary for the three cruisers to operate in an area slightly more than 3,000 yards across. Ships had to lie to, using engines only to maintain position.

2. Close-in gunfire support, coordinated with bombing and strafing, is, of course, highly effective in facilitating landings on defended beaches. However, there are obvious disadvantages in obliging fire support ships to lie to - in particular they present easy targets for submarines and shore batteries. In this operation, the former were presumably not present, and shore batteries had apparently been destroyed or neutralized. It is believed, however, that in situations where there is little sea room for fire support ships, good results could be achieved by stationing some ships well outboard of close support ships (4,000 to 10,000 yards, depending on circumstances), the outboard ships firing over close support ships as necessary. This would provide both flat trajectory and plunging fire; inboard ships would not be endangered if distance between groups was sufficient and proper care exercised. Both groups would be more free to engage in avoiding maneuvers, and in seeking advantageous ranges and bear-

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ings, than if all ships were compressed into the same small area. While the outboard group would have to check fire during air strikes on beaches, this would be temporary. The above suggested arrangement is, of course, already common practice in the case of cruisers and battleships firing over close support destroyers.

3. It goes without saying that when heavy ships are required to lie to in enemy waters, adequate screening vessels must be provided and every precaution taken to protect the heavy ships. Although more destroyers were available for this purpose than in similar operations in the past, they were all needed.

### OPERATION PLANS

*CTF 58 comments:*

Operation plans are voluminous and repetitive. It is difficult to ascertain exactly what is desired particularly when shifting targets from one area to another and from one command to another as the carrier task groups must do frequently.

### ORDNANCE MATERIAL
(Also see AMMUNITION)

*CTG 58.2 comments and concludes:*

1. Daisy cutters were found to have maximum destructive effect in areas containing lightly constructed buildings such as at AGANA on GUAM and KOROR and MALAKAL Islands at PALAU. Unfortunately, the supply of prefabricated daisy cutter attachments on hand was entirely inadequate to meet the desired requirements. On the WASP a 36-inch wooden extension on the AN-M219 fuse was constructed which operated satisfactorily, but it is believed that a substantial number of daisy cutter fuse attachments should be carried aboard each carrier. The 2000# bomb with daisy cutter fuze is a most effective weapon.

2. Rockets proved very effective in knocking out AA positions and in hitting pinpoint targets. Both at GUAM and at PALAU, early strikes encountered intense AA fire. By concentrating rocket fighters on these positions, a number of AA positions were knocked out with a consequent reduction in intensity of fire over the target areas.

### PATROL

*CTF 51 comments:*

The enemy made several attempts to evacuate personnel from SAIPAN and TINIAN by submarine and aircraft. It is believed that our tight, close-in patrol around the islands by LCI's, PC's, and other small craft prevented any success by submarines. One prisoner of war stated that a submarine had tried for at least two nights to get in to MARPI POINT (SAIPAN), but had been unsuccessful. On four other occasions, the patrol sank or drove back landing craft moving along the shore, though whether for the purpose of contacting submarines or for transporting troops is not known in all cases. It is known, however, that during one night one enemy plane landed on the MARPI POINT airfield, and on another occasion two or three planes landed on the southern airfield on TINIAN. In both cases, the planes remained about three hours and took off successfully. However, on several other occasions, aircraft landing attempts were defeated by the use of starshells and gunfire on the fields.

### PHOTOGRAPHY

*CTG 58.1 comments and concludes:*

In the MARIANAS ISLANDS, coverage of assigned targets was good both in quality and quantity.

Optimum photographic results will probably not be attained until all carriers have received photographic planes and pilots experienced in photographic work. Three trimetrogon equipped fighters in the Task Group took good photographs but more training and experience with this equipment is needed.

### PLAN VICTOR

*CTF 53 comments:*

In order to permit simultaneous naval gunfire and air bombing and strafing against enemy targets, the maximum ordinates of the various trajectories of projectiles were considered in evolving what was termed "Plan Victor". During the time that this "Plan Victor" was in effect, limitations were placed upon naval gunfire from battleships, cruisers and destroyers. Each type of gun was given a maximum range at which it could be fired during the time "Plan Victor" was in effect. Planes were then perfectly safe to do their bombing and strafing in the area being fired upon by naval gunfire so long as they pulled out at 1500 feet.

### PLANE STRIKES DURING BOMBARDMENT

*CTU 53.5.3 comments and concludes:*

1. On many occasions, air strikes were made without notice to Unit Commanders and firing ships. Fire was checked as soon as planes were observed

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PLANE STRIKES DURING BOMBARDMENT *(Cont.)*

near bombardment target areas, but in some cases planes flew in low from other side of island and were not seen until they had passed through ship's arc of fire, thus seriously endangering planes.

2. There were two cases observed of bombs falling close to fire support ships. This could be eliminated in most cases if bombing runs were made *from* seaward - so that in event of delayed releases or casualty to release gear, bombs would fall inland instead of in fire support areas.

PRACTICE - NECESSITY FOR

*CO USS CLEVELAND comments:*

It is suggested that the preparation period between operations of a similar nature be spent in training ships along lines which, due to the nature of the last operation, they have had little opportunity to practice. For ships which have just been bombarding exclusively, like this one, a program of intensive broadening training in antiaircraft and regular naval surface shooting is urgently needed, rather than more training in bombardment, even though a ship may be scheduled to do more bombarding in the next operation. Retention of all-around gunnery skill is essential, and this can only be accomplished by all-around training. Most of the MARIANAS bombardment ships are "professional" bombarders, and will not lose that skill for months. They do, however, need all-around gunnery training badly.

PREDAWN LAUNCHES

*CTG 58.1 comments:*

By launching fighter sweeps the afternoon before each major strike day, the need for predawn launches was practically eliminated. With the number of operational enemy planes greatly reduced by the fighter sweep, two VFN over each enemy airfield as hecklers and two over the Task Group prevented enemy planes from attacking during the early morning hours. No enemy plane at any time during the operations was able to penetrate the air screen (CAP and Anti-snooper VF) at night or day. The predawn lighting arrangement with carriers, inner screen ships and rendezvous picket destroyers showing white truck lights, the destroyer screen showing red truck lights, and rendezvous picket destroyers showing the same color glow lights as the related carriers has been reported upon favorably by pilots and is now in standard use in this Task Group.

PROVISIONS
(Also see LOGISTIC RECOMMENDATIONS)

*CTF 58 recommends:*

The operations kept some destroyers and battleships a long time away from fresh provisions. It is recommended that all ships be supplied with fresh and frozen provisions at least once a month if practicable.

RANGES

*CTG 53 1.15 comments:*

The effectiveness of major caliber shells was greater at longer ranges. At ranges under 5000 yards too many were duds. The percentage of duds increased as the range decreased where the point of impact was level or nearly level ground.

Although it was considered more effective to deliver fire on most of the targets encountered in this action from ranges outside of 6000 yards to provide sufficient angle of fall to insure detonation of Mk. 29 point detonating fuses, most fire was delivered at shorter ranges in compliance with the orders of C.T.F. 53.

*CTG 53.5 concludes:*

Experience in the operations demonstrated to the Task Group Commander that there is only one effective criterion for shore bombardment. That is the angle of fall of the shells on the target. If the ship can approach closely enough to use its batteries against *vertical* targets, all buildings, pill boxes and the like can be destroyed by close-in, pointer fire as shells will be detonated by striking the vertical surface of such targets. If, however, an approximately vertical surface cannot be presented, much better results can be obtained by increasing the range to the point at which the angle of fall is twenty degrees. This angle of fall will permit projectiles to fall within revetments and open fortifications, and cause fuzes to detonate without endangering our own troops by ricochet.

RESCUE FACILITIES

*CTG 58.4 comments:*

At 1430 12 June AUSBURNE and THATCHER were detached on a rescue mission to a position 10 miles west of PAGAN. One Kingfisher capsized attempting to take off with a rescued pilot. The second OS2U then landed but was unable to take off with the total of 5 men. The two destroyers were successful but the incident illustrates the unsuitability of

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the OS2U as a rescue plane under any except ideal sea conditions. Between 1930 and 2130 on the 12th the two destroyers sank 2 coastal vessels in Lat. 18-16 N., Long. 145-40 E.

*CTG 58.1 comments and recommends:*

1. Rescue facilities provided by submarines were excellent as usual. All scheduled submarines were on station and communication was established with them by special CAP provided for them in each instance. The USS STINGRAY while making a rescue at GUAM was taken under fire by shore batteries and the pilot was towed to sea in his rubber life raft after *hooking onto the submarine periscope*, and *safely recovered*.

2. For the second IWO JIMA attack on 24 June, Commander Submarines, Pacific Fleet, was asked to provide a rescue submarine and did so even though the request was made scarcely twenty hours before the proposed strike.

3. It is recommended that submarines be provided with Annex BAKER to CentCom TWO, Voice Call Book, so that they may know with whom they are talking.

4. It is also recommended that as soon as practicable, submarines broadcast the names and parent ships of men rescued so that search for these men may be discontinued.

5. Destroyers and cruisers of the Task Group performed a magnificent job during the days of the engagement with the Japanese Fleet Forces and rescues were affected during most difficult conditions of darkness and in the midst of many maneuvering ships. On the following day seaplanes of the Task Group rescued a total of nine airmen at distances ranging from 75 miles to 175 miles away from the Task Group.

## RESERVICING PLANES
(Also see SEAPLANE BASE)

*CO USS TENNESSEE comments:*

The arrangements made for reservicing battleships' spotting planes at a base in SAIPAN were excellent. This provision enabled battleships to remain in their fire support positions at all times during the bombardment, as withdrawals for recovery and servicing of planes were unnecessary.

*CTF 51 recommends:*

That efforts be continued to solve the reservicing problem for Battleship and Cruiser-based planes during the assault along the following lines:

(a) Tenders (AVD)

(b) Ships best able to do so reservicing planes of vessels engaged in close support.

## RICOCHETS
(Also see RANGES)

*CO USS TENNESSEE comments:*

When firing the 14" at the low ranges used for close supporting fire, the number of ricochets is increased. Occasional ricochets were observed whenever the range was below 3500 yards and some even at 6000 yards. This was true even when 100 per cent point detonating fuzes were used. This not only constitutes a waste of 14" projectiles, but it may prove dangerous to fire support ships on the other side of the island.

## SAFETY MEASURES

*CTF 51 comments:*

The size of the objective, the nature of the terrain and the provisions of the Landing Force Attack Plan made it impossible to establish any so-called "Permissible zones of fire." Instead, all direct support ships were controlled entirely by their Shore Fire Control Parties, and observed fires were presumed to be safe. Ships fired targets of opportunity only when specifically authorized to do so, unless firing by direct spot plainly well in advance of our lines. This system had the advantage of enabling ground forces to control fire through normal command channels ashore.

Ships assigned deep support missions were given specific target areas and a "safety line" behind which fire should not be placed. Such "safety lines" were separately designated with each ship assignment and covered the one assignment only.

## SEAPLANE BASE

*ComBatDivTWO comments:*

Because of the nearness of an established seaplane base at SAIPAN, the problem of reservicing VOS ship-based aircraft was not acute during this operation. Planes launched for gunnery observation proceeded one at a time to the established base and were reserviced there. This relieved firing ships from the necessity of ceasing bombardment at a critical time in order to withdraw, recover, and reservice planes.

## SCREENING

*CTU 53.3.5 (also 53.2.1) comments and recommends:*

1. The Joint Screening Plan worked extremely

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well and no revisions were necessary until extension of the area assigned the Fire Support ships forced a revision of the screen to include additional areas. One reason the Screening Plan worked well was its wide distribution made possible by the delay in the Guam operation. The Screening Plan should be made an integral part of the Operation Plan to insure that all ships have it.

2. Obviously the screening of an area must be coordinated. The Screen Commander is the logical one to do this. Therefore the screens of *all* ships operating within the screened area should report to the Screen Commander for assignment. The heavy Fire Support ships are generally very loath to do this. I believe this is because they either do not have a copy of the Screening Plan or have not taken the trouble to examine it.

3. When screening an area using the figure eight patrol method, it is necessary to coordinate all ships so that on the screen all patrolling vessels are equidistant at all times. The important point in this method is the *time* at which each ship passes through the mid-point of its patrol. The easy method of doing this is to have them pass through the mid-point on the hour and every 15 minutes thereafter. At a patrol speed of 15 knots this gives a patrol length of approximately 6800 yards. If the patrol speed is changed the length of the patrol should be changed accordingly, but the *time should remain the same.*

## SHORE FIRE CONTROL PARTIES
(Also see AIR SPOT)

*CTG 53.2 comments:*

*Shore Fire Control Parties* functioned comparatively well, particularly the regimental parties. Coordination within regiments was not established fast enough but the Brigade Naval Gunfire Officer concurred with CTG 53.2 and a priority basis of assignment of ships and frequencies was set up in accordance with the tactical situation. The low power of both TBX and SCR 284 radios necessitated relaying in several instances. Further, the parties were having trouble in parts replacements of their radios. All regimental parties proved very valuable sources of combat intelligence which was passed on to the support ships. Coordination with the air liaison parties apparently was nonexistent, and a careful check on this situation was necessary continuously by CTG 53 2. Spotting and target designation was excellent, and also the adjustment of starshells during the night. Changing frequencies caused some difficulty at the start but gradually became much better. Net discipline was violated as much by the ships as by shore fire control party. In general, these parties performed well and considering the difficulties under which they operated, deserve much credit. Communications still remain their main problem, and this was and is due to the equipment issued. Where SCR 694 radios were used (i.e., the Regiments and the Brigade) very little difficulty was experienced.

*CTF 52 comments and recommends:*

The question of whether or not to require a spotter to maintain continuous communication with his assigned ship has resulted in some misunderstanding and suggests some changes in shore fire control party organization. It cannot be expected of one man to spot supporting fire all day and starshell all night without relief for the duration of an operation like SAIPAN or TINIAN. Actually, when the Task Force Commander ordered that no starshell illumination would be delivered without the benefit of continuous communication and spot, because of the danger of firing "blind", the battalion naval gunfire liaison officer spelled off the battalion spotter to allow him some rest without loss of support.

*Recommendation:*

That continuous communication with spotters continue to be required except in very exceptional circumstances. That the battalion naval gunfire officer system of organization be replaced by assigning an additional battalion spotter. This is a radical change to our present shore fire control party set-up, but it is the opinion of Commander Group TWO that young naval officers now assigned to duties as naval liaison officers do not know much more, if any, about naval gunfire than USMC battalion spotters, since few have ever been associated with gunnery on board ships. More experienced naval gunfire liaison officers, particularly officers who actually have shipboard gunnery experience, should be assigned to each regiment for coordination of requests for naval gunfire by battalion spotter.

*CTF 53 comments:*

The performance of shore fire control parties attached to the 3rd Marine Division was in general *very gratifying*. All shore fire control parties executed their missions *successfully* under trying conditions, with numerous close support fire missions being delivered without mishap.

The *chief difficulty* in the operation of shore fire control parties was the coordination of their call fire requests with requests for air strikes by the air liaison officers. On several occasions, naval gunfire liaison officers and air liaison officers called for fire on identical targets at the same time. This caused considerable confusion

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because ships were often forced to check fire in the middle of a mission to permit air strikes. Of course no such difficulty was experienced when "Plan Victor" was in effect.

*CTF 51 recommends:*

That basic training of ships and shore fire control parties at KAHOOLAWE be intensified and that the necessary permanent organization to do this be ensured.

### SMOKE - USE OF
### (Also see AMMUNITION - WHITE PHOSPHOROUS)

*CTF 51 comments and recommends:*

The use of smoke for protecting large numbers of anchored vessels against night aircraft attack proved very successful. Conditions usually were favorable, as the air was humid and the wind usually below ten knots.

Besler generators proved very effective and produced large quantities of persistent smoke.

Mark 3 smoke pots are more suitable than MI pots for use in small boats because they produce approximately 2½ times as much smoke in the same given time.

M4 smoke floats are best used by placing them in a line normal to the wind and the windward of the ships to be covered with smoke.

The use of M4 floats as described above is the most effective method of covering an individual ship with smoke through the use of small boats.

In general, Mk 1 and Mk 2 floats are too large for use in small boats.

Mk 3 pots used in the Mk 3 smoke generator are the best substitute for Besler generators.

It is recommended that all AMs, YMSs, PCSs, PCs, SCs, and other small craft able to carry Besler generators, be so equipped while participating in amphibious operations.

It is recommended that during amphibious operations a reserve supply of at least the following amount of smoke equipment be established at an advanced base near the objective:

60,000 gallons fog oil
9,000 M4 floats
3,000 Mk 3 pots

Based on an average of thirty ships, it is estimated that the above equipment will provide smoke for 20 hours.

### SPOTTERS

*ComBatDiv TWO comments and recommends:*

Top spotters and air spotters are not sufficiently trained in target and terrain appreciation to obtain the greatest return for the amount of ammunition expended. A thorough understanding and study of contoured maps and aerial photographs, when target selection and location is difficult, would assist in ascertaining:

(a) Type of target to be expected in any given target area.

(b) Approximate arc of fire of any known weapon in any target area.

(c) Probable location of suspected artillery, mortar, and machine gun positions, and their supplementary and alternate positions.

(d) Possible location of enemy troop concentrations, avenues of approach, routes of withdrawal, observation posts, and command posts.

(e) Possible location of enemy ammunition and supply dumps, as well as enemy lines of ammunition and supply.

*CTF 51 recommends:*

That the use of experienced artillery observers (Army or Marine Officers) as spotters in VOS and VSO planes be continued and extended.

### SUPPORTING FIRES - CLOSE

*CTF 53 comments:*

1. *Destroyers Close Support* - Destroyers were assigned to either flank of the boat lanes to protect the assault boat waves from enemy reaction. They were to move close in to use all calibers of machine guns and 5 inch. They were assigned night harassing missions to keep the enemy awake and to disclose his movements.

2. *LCI'S Close Support* - Nine (9) LCI's were assigned to each the Northern and Southern Attack Groups. These were to precede and protect the assault boat waves, using 20MM and 40MM guns. Finally, they were to fire a tremendous salvo of 4.5" beach barrage rockets to prepare the way for the troops to land with a minimum of resistance.

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SUPPORTING FIRES - CLOSE *(Cont.)*

3. Prior departure GUADALCANAL each of the above eighteen (18) LCI's had been provided with forty-two (42) CIT Type 8 Rocket Launchers. Each of these with a capacity load made it possible to fire a total of 504 rockets from each LCI in a very short period of time. Each LCI carried a complete reload for possible later use upon targets near the water's edge which might impede the advance of our troops.

4. The total of 4,536 rockets landing on each of the North and South landing areas was most successful and is believed to have contributed to the ease with which the Marines were able to land.

5. At 0806, the *LCI(G)'s, preceding the assault waves*, commenced firing their ranging rocket salvos, and at 0819 McKEE reported from Fire Support Area No. 5, via TBS, that the leading assault wave was 1200 yards from the beaches. This was in accordance with previous instructions and this served as a signal that the wave was 8 minutes from the beaches (moving forward at 150 yards per minute).

6. The LCI(G)'s fired their tremendous salvos of 4.5" beach barrage rockets which from all appearances landed on the beaches and just inland from same and were of much assistance in paving the way for the assault troops both through destructive and neutralizing effect. At 0822, as scheduled, the intense close support naval gunfire commenced with all fire support ships stepping up their rate of fire preparatory to the landing of the troops. The first waves actually landed between 0828 and 0829, and naval gunfire was lifted accordingly to the backward areas and farther flanks of the landing beaches. The naval gunfire continued on schedule until How plus 90 (1000), at which time call fire was checked and gradually resumed again as the various shore fire control parties made request for fire.

*CTF 51 comments:*

1. The extreme length of the beaches presented an obstacle to a great concentration of fire on the beaches. Additional fire was provided by directing Fire Support Unit EIGHT to deliver enfilade fire at the beach and areas behind it from positions off the south tip of SAIPAN. The disposition of fire support ships during the close support phase is shown graphically in the Schematic Landing Diagram.

2. It is felt that the beach preparation could have been improved by the following additions and amendments to the original plan and execution thereof.

3. Close-supporting fires consumed the majority of the 5-inch ammunition expended (139,691 rounds). Much of this ammunition was expended at so-called "area targets" of somewhat dubious value. "Area targets" are usually fired on the suspicion, not the certainty, that enemy installations are hidden in the area covered. Consequently, to be effective in close support such "area targets" should generally be fired only immediately prior to an actual attack made while the neutralization effect is still present. Field artillery is much better qualified for this type of fire by reason of its greater accuracy and smaller burst patterns.

4. The topography of SAIPAN and similar islands makes them ideally suited to the use of naval gunfire in deep support. A central ridge formation runs the long axis of the island, and enemy defenses and artillery were emplaced in defilade in the valleys which ran generally perpendicular to the shore line. Naval gunfire, employed up those valleys and considerably in advance of our troops would have been particularly effective. A considerable amount of such deep supporting fire was profitably employed, particularly by the Cruisers, but expansion and intensification of the program was hindered by the demands for close support by almost all ships available.

SUPPORTING FIRES - DEEP

*CTG 53.2 comments:*

*Deep Supporting Fire* was delivered primarily on call of the Brigade but was also utilized by the regiments to a minor extent on the southern and eastern flanks. Plane spot supplemented by shore fire control party spot was normal. Scheduled fires for coordinated attacks were all arranged through the Brigade. Deep plunging fires delivered by 6, 8 and 14-inch guns were employed for the majority but these calibers were supplemented by 5 inch 38 and 5 inch 25 calibers at times. Coordination of the ships was achieved by CTG 53.5 within the fire support area.

*CTF 53 comments:*

During the day, available naval gunfire support which was not needed by shore fire control parties for close support missions was utilized for deep supporting fire in accordance with requests from Corps and Division or Brigade Headquarters. As the attack progressed, a list of deep-support fire missions was submitted to CTF 53 each night to be covered the following day by naval gunfire. This system proved very satisfactory and was continued as long as naval fire support was available

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*CTF 51 comments:*

1. Special missions of deep support were scheduled whenever ships were available. Such missions were planned and assignments made on a day-to-day basis, in order that last-minute developments might be included. Target maps were maintained for both SAIPAN and TINIAN. On these maps were posted all new intelligence information, results of photo studies, and targets discovered by any other means. Records were kept of the action taken against each target and the result. All such information was continuously exchanged with Commander Support Air, and targets were divided between Air and Naval Gunfire on the basis of suitability. A fire support ship would then be assigned a sector to cover, specific targets would be enumerated, an Air Spot made available, and an ammunition allowance specified. After completion of the mission, the firing ship was directed to send a detailed report of results.

2. Special missions of this nature were scheduled throughout the Northern half of SAIPAN. Numerous special bombardments of GARAPAN and TANAPAG were scheduled. In the later stages of the operation (from TANAPAG Northward) Northern Troops and Landing Force Headquarters submitted a daily list of target requests for such special missions, thereby coordinating the gunfire activities more closely with troop needs. Particular commendation should be extended to the BIRMINGHAM, CLEVELAND, MONTPELIER and INDIANAPOLIS for their thoroughness on these missions and for the completeness and accuracy of their reports on bombardments of both SAIPAN and TINIAN.

3. It is significant to note that prisoner of war reports continuously emphasized the effectiveness of naval gunfire and artillery in disorganizing the enemy by disrupting communications, preventing troop assemblies, and prohibiting movement of supplies and reserves.

## TORPEDO TRAINING PRACTICES

*CTG 58.1 comments and recommends:*

Destroyers of this Group were unable to conduct torpedo firing exercises prior to engaging in the operations covered by this report. The reason was lack of replacement torpedoes. In the event of surface action, destroyers might well play an important part. Therefore every effort should be made to provide torpedo training practices.

## UNBEATABLE TEAM

*CTG 53.5 comments:*

The performance of all units of Bombardment Group TWO during the MARIANAS campaign is deserving of the highest praise. From a material and battery standpoint the ships performed splendidly. Personnel, both officers and men, operated at the peak of efficiency. The bombardment group went about its business with capable thoroughness and placed a tremendous volume of fire on their objectives with commendable efficiency. That they were enabled to do this throughout the complicated operations of the campaign, covering a period of two months, was due to the careful foresight and planning of those in charge of the operation. The Task Group Commander at times felt that his principal duties were concerned with standing by for unforeseen contingencies, only to find that they had been foreseen. He takes great pride in the alert initiative of his subordinates, who made all contingencies seem minor incidents as they took everything in stride. We had an unbeatable team -- our sailors, our soldiers, and those peerless amphibians, our marines.



U. S. GOVERNMENT PRINTING OFFICE O—1944