

NO 75-8838

722

**UNCLASSIFIED**

5th MarDiv,  
In the Field,  
16 Nov 1944.

D-2 SPECIAL STUDY OF THE ENEMY SITUATION

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A. TABLE OF DISTANCES

(1) All distances from the objective shown below are in nautical miles:

<u>ENEMY BASES</u>	<u>ALLIED BASES</u>
HAMA JIMA.....120	SAIPAN.....625
CHICHI JIMA.....140	GUAM.....700
PAGAN.....470	ULITHI.....888
HACHIJO JIMA.....500	ENIWETOK.....1,440
MINAMI DAITO JIMA...525	KWAJALEIN.....1,760
NII JIMA.....580	MIDWAY.....2,253
KUSHIMOTO.....600	PEARL HARBOR.....3,330
TATEYAMA N.A.S.....615	
NAGOYA.....645	
YOKOHAMA.....645	
MARCUS.....650	
TOKYO.....660	
AMAMI O SHIMA.....675	
OKINAWA JIMA.....740	
FUSAN.....900	
YAP.....936	
SHANGHAI.....1,070	
PALAU.....1,110	
TAKAO, FORMOSA....1,160	
TRUK.....1,209	
MANILA.....1,290	
WAKE.....1,441	

Classification changed to  
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 by authority of [Signature] [Signature]  
 by [Signature] [Signature]  
 R. J. KELLER  
 Maj., Inf.  
 Custodian

B. HISTORY AND POPULATION

(1) NANPO SHOTO, or "Southern Islands," is a chain of small volcanic islands running in a long line from almost the outskirts of TOKYO southward toward the MARIANAS. O SHIMA at the north is 65 miles from TOKYO. WORKMAN at the south is about 300 miles north of the MARIANAS and 660 miles from TOKYO. These islands guard the immediate approach to TOKYO and their

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D-2 SPECIAL STUDY OF THE ENEMY SITUATION (CONT'D)

value is more military than economic. They are under the jurisdiction of the TOKYO Prefectural Government and are administered as an integral part of JAPAN. All of NANPO SHOTO is peopled by Japanese, early Caucasian and Hawaiian settlers having lost their racial identity by intermarriage. The religion is that of the Japanese mainland with Buddhism and Shintoism predominating. Few of the natives are Christians. The VOLCANO ISLANDS (KAZAN RETTO) were discovered in 1543 by the Spaniard, Bernard de Torres. The Japanese commenced colonization in 1887 and by 1891 had such a firm grip on the islands that they were incorporated into the Ogasawara Branch Administration.

Of the KAZAN RETTO, the only island of importance is WORKMAN. Its importance is almost entirely military and lies in the fact that the island has enough flat ground to accommodate airfields. WORKMAN has approximately 1091 civilian inhabitants living largely at MOTO YAMA in the northern part of the island, who make their living by growing sugar cane and vegetables, by fishing and working at the sugar refinery. Sulphur, in considerable quantities, is present, but it has not been definitely ascertained how much use is made of it. Banana and coconut trees grow abundantly in the low places. There are no perennial streams on the island, and the Japanese have been forced to produce water from sulphur springs in addition to using catchments.

C. TERRAIN ANALYSIS

(1) Terrain: General

WORKMAN is essentially a volcanic island. The dome-shaped northern half of the island is formed by several rocky hills, ranging from 340' to 387' in height. This is connected by a narrowing neck of land to SURIBACHI YAMA (MOUNTAIN), a volcanic cone rising precipitously from the sea to a height of about 556', and forming the southern point of the island. The island is about 9,000 yards long in a NE-SW direction, and about 4,700 yards across, NW-SE, at the widest point in the northern half. The neck of land connecting SURIBACHI YAMA to the northern part of the island narrows to a width of about 700 yards, just north of that volcano. The northern end of the island is generally round in shape.

A plateau about one mile in diameter comprises the central area of the northern half of the island. The surface is irregular but maximum difference in elevation amounts only to about 50 feet. Slopes from the north central plateau to the coast have an average grade of about one in ten, but they are rough and irregularly broken by rocky cliffs in many places. The slope southwestward from this plateau, along the ridge of the narrow neck of land to SURIBACHI YAMA, is gentle, about one in fifty. The slopes from the axis of this ridge to the beaches have an average gradient of about one in fifteen. The ridge reaches a low of about 100 feet just north of SURIBACHI YAMA. (See Terrain Analysis Map for general contour of island.)

(2) Coastline

The coastline of the northern half of WORKMAN may be described generally as high, rocky, and steep. The northeast coast, from KITANO, two miles southeast to the easternmost point of the island, is composed of dark volcanic sand. Although relatively smooth, the beach here is narrow and steep, and in places is broken by rough rock outcrops. This beach is backed by very rough terrain and is irregularly obstructed

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D-2 SPECIAL STUDY OF THE ISLAND SITUATION (CONT'D)

by rocky shoals. The remainder of the northern coast is very rough, immediately backed by serrated rock cliffs, and obstructed by boulders with no real beaches.

The southern half of the island affords good beaches of dark volcanic sand on both the east and west sides, beginning just north of SURIBACHI YAMA.

(3) Streams

There are no perennial streams on the island.

(4) Conditions of Soil

In general, the dome-shaped northern part of WORKMAN has a thin soil cover, bed rock being exposed over more than half of its surface. Over the remainder of the northern part, the soil probably has an average depth of only a few feet at most, and as a result, digging-in can be expected to be difficult in this area. SURIBACHI YAMA is a rocky cone with no soil at all over most of its area. The soil on the ridge connecting SURIBACHI YAMA with the north-central plateau has an estimated depth of from five to ten feet and there are no extensive rock outcrops on this ridge. The soil of the upland areas is a stony clay which is dusty when dry and very slippery when wet. It drains and dries rapidly in its natural state.

The beaches and low slopes of the ridge are composed of dark, coarse, volcanic sand.

(5) Vegetation in Division Zone of Action

There is no vegetation in the eastern landing beach area to provide concealment or hinder movement of troops.

The west slopes of the central portion of WORKMAN are checkered with what appear to be fields under cultivation, separated by hedgerows 10 to 15 feet high.

Grass and low scrub trees, sufficiently heavy to offer good concealment, cover much of the slopes of the northern half of the island.

Around the base of SURIBACHI YAMA, going from the west to the northeast, there is a fringe of woods and scrub growth which grows up the side of the mountain for about 150 feet on the northwest and parts of the north side. The trees and scrub growth in this area vary in height from 10 feet to 25 feet. On the northwestern rim of the crater is a patch of trees and scrub, with one small clump on the northern rim. The fields on the northern edge of the woods at the base of SURIBACHI YAMA are separated by five finger-like wooded projections and contained sugar cane from 3 to 4 feet high on 25 Sep 44. Wooded areas and cane fields at the base of SURIBACHI YAMA are crisscrossed with track activity.

See Military Obstacles Map for sugar cane cultivation in Div ZofA.

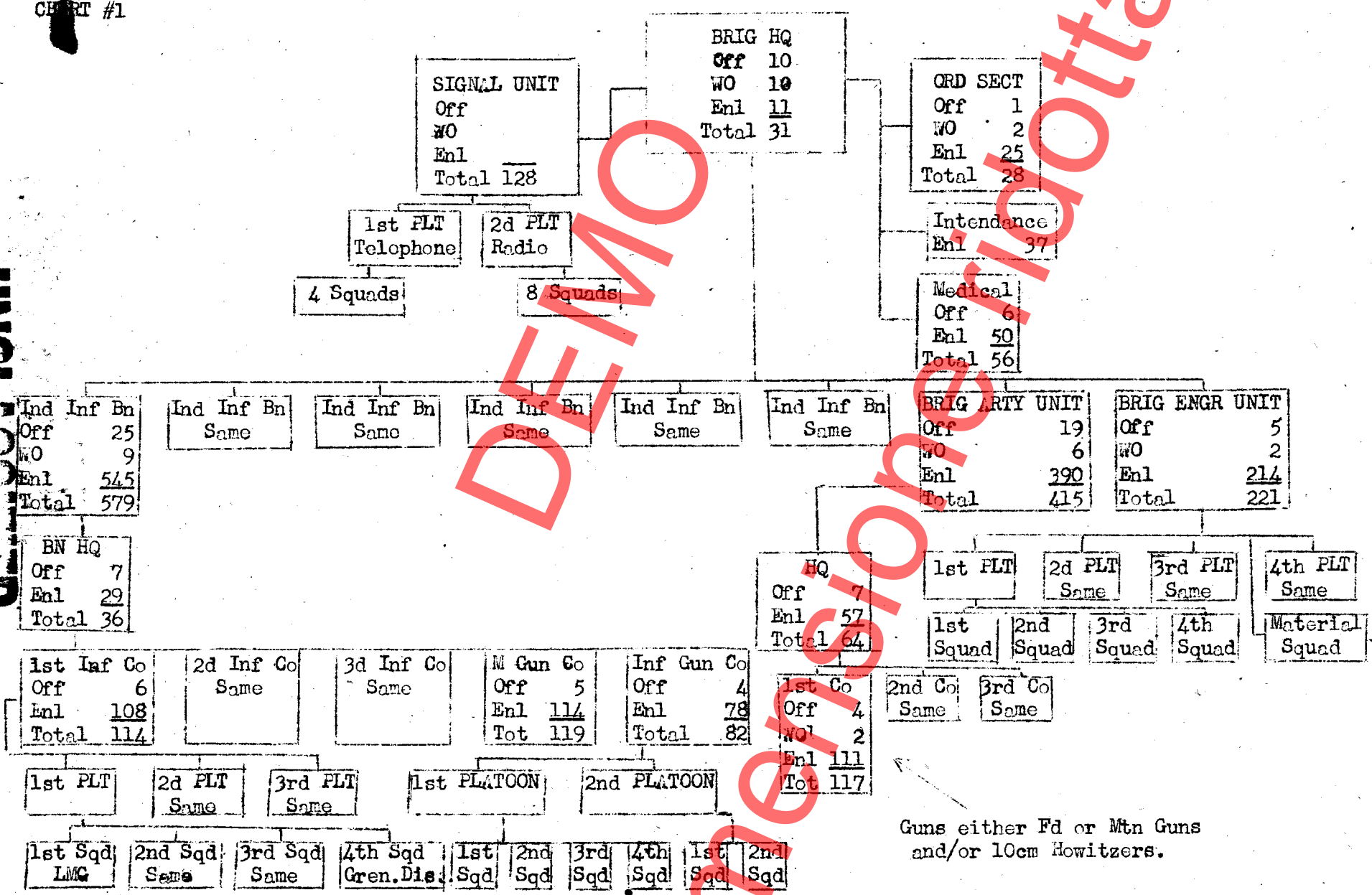
(6) Critical Terrain Features

a. SURIBACHI YAMA. This mountain, at the southern end of the island, rises to a maximum height of 556 feet, commands the approaches to

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CHART #1

2ND MIXED BRIGADE



Guns either Fd or Mtn Guns and/or 10cm Howitzers.

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(2) EMPIRE (HONSHU, KYUSHU, N. NANSEI SHOTO)

In view of the great threat to the Empire by the attack on the target, it must be assumed that every available plane will be used to oppose our landing and succeeding operations.

Operations since 10 October 1944 have seriously depleted air strength which the enemy had been hoarding in the Empire since June. This is particularly true of naval air strength.

It is believed that there are about 500 planes with sufficient operating range to reach the target directly from the homeland. These probably will operate from the concentration of airfields in the TOKYO-YOKOHAMA-OSUBI BAI areas. By the use of HAKHISO SHIMA, in the northern NANPO SHOTO, as a refueling point, many additional planes, including single engine bombers and fighters may be brought within effective supporting distance of WORKMAN.

(3) SOUTHERN NANSEI SHOTO

Our attack may also bring enemy air reaction from planes based on the five fields in the OKINAWA area, 740 miles away. These planes may use MINAMI DAITO SHIMA (25°50'N:131°14'E), 525 miles west of WORKMAN as a refueling point.

(4) CARRIER-BASED AIRCRAFT

Since the beginning of the MARIANAS operations, there have been heavy losses inflicted on the enemy, both in carriers sunk and damaged, and in carrier aircraft and pilots eliminated. The losses suffered in the two fleet engagements in the PHILIPPINE area have probably left them with few well-trained carrier pilots.

Although it is not definitely known what enemy units were sunk and to what extent others were damaged, it is estimated that the enemy cannot have carrier capacity, now operational, for more than about 400 planes.

BY COMMAND OF MAJOR GENERAL ROCKEY:

RAY A. ROBINSON,  
Chief of Staff.

DISTRIBUTION: Annex XRAY

OFFICIAL:

*George A. Roll*  
GEORGE A. ROLL,  
LtCol, USMC  
D-2.

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APPROX VARIATION  
1° 25' W (1944)

**TERRAIN ANALYSIS**

- Elevation 100 to 220 ft.
- Elevation 200 to 220 ft.
- Location of O.P. (75.05-70.40)
- Observer's eye 5 feet above the ground
- Tree mask taken as 25 ft.
- Defiladed areas behind hedge rows not shown
- No perennial streams on the island
- Scale 1:10,000
- Area in sight defilade (75.05-70.40)
- Elevation 300 to 320 ft.

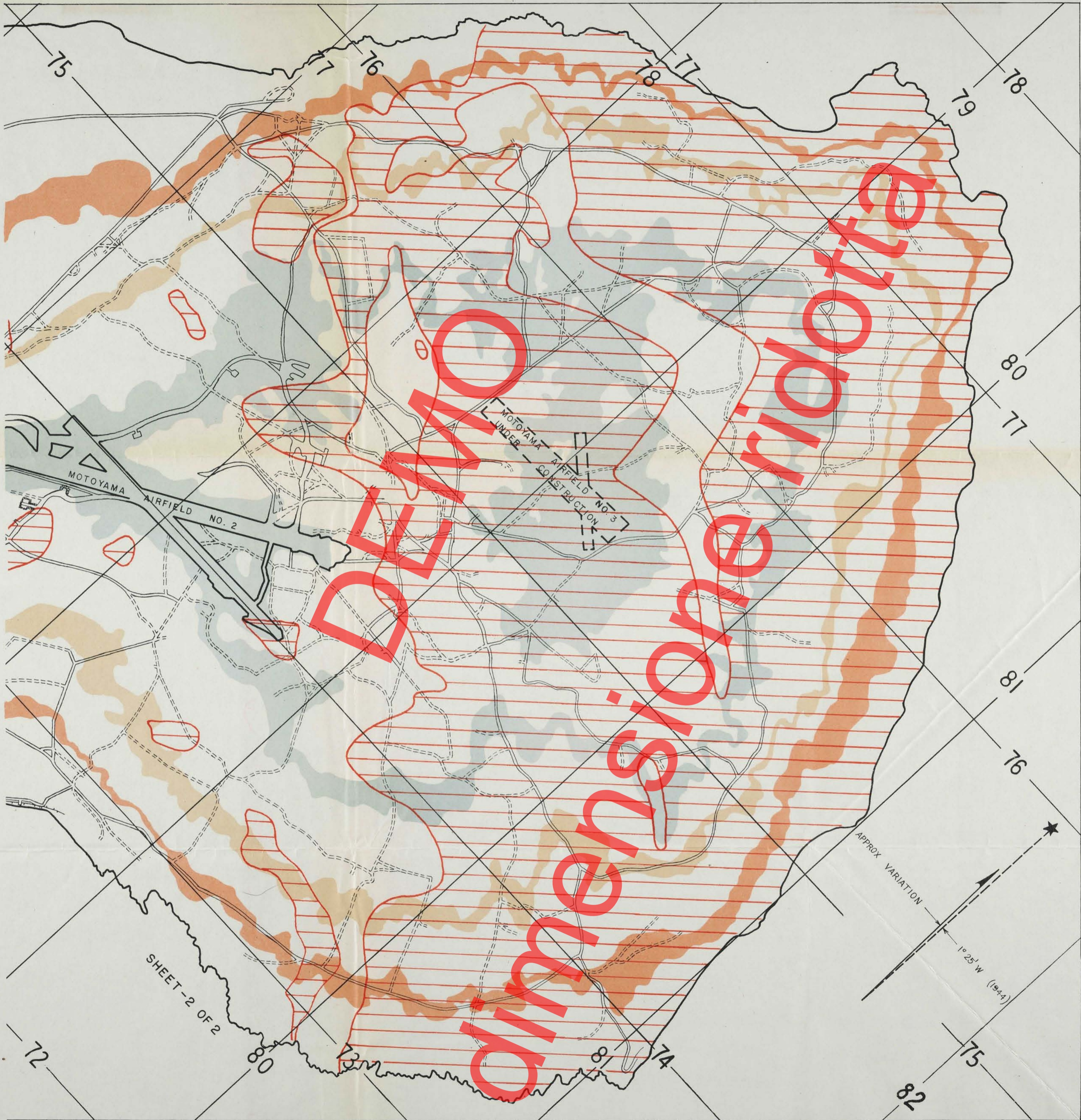
Compiled by D-2 Sect.  
5th Marine Division

SHEET. - 1 OF 2

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November 5, 1944

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SHEET - 2 OF 2

APPROX VARIATION

1° 25' W (1944)

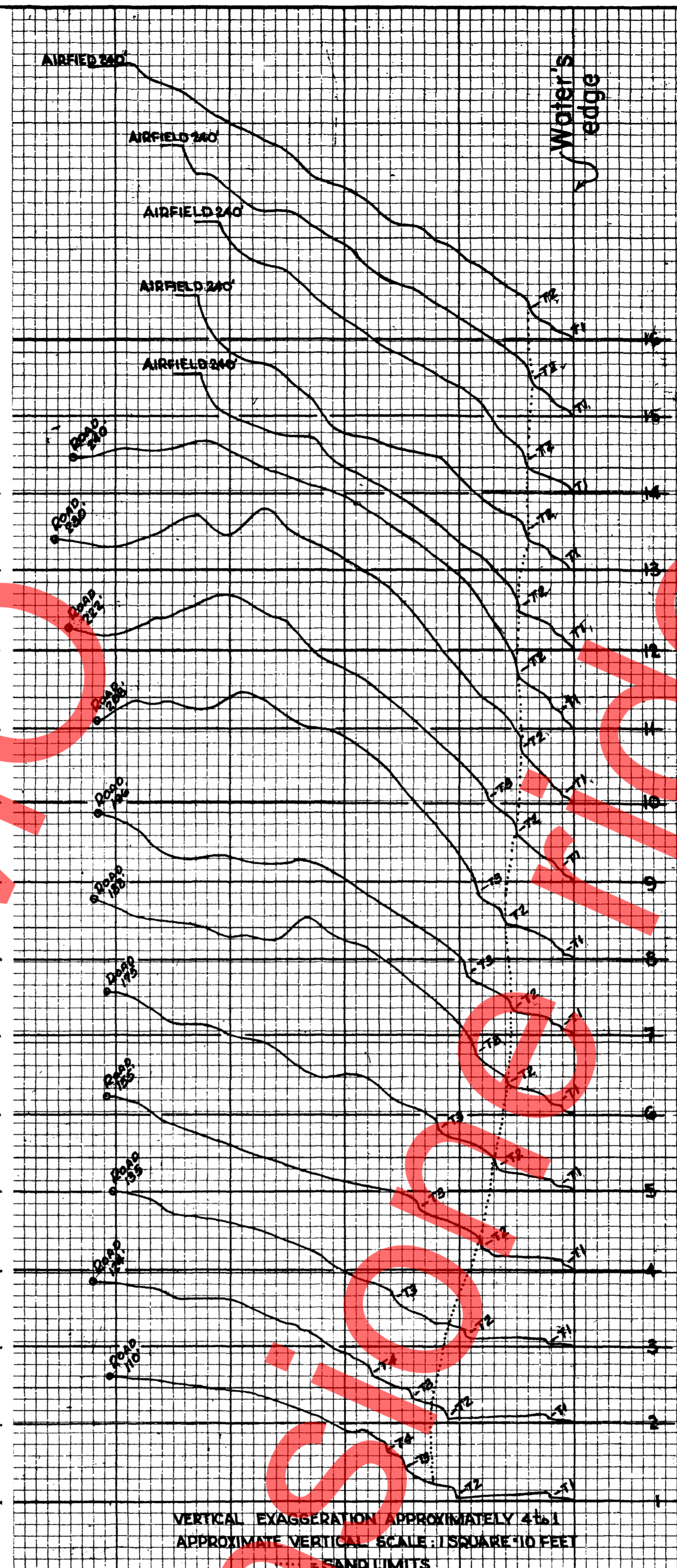


BEACH STUDY - EAST BEACHES  
 COMPILED AND REPRODUCED BY THE  
 5TH. ENGR. BN. ALL DATA COMPILED BY  
 D-2 SECTION, 5TH. MARINE DIV. FROM  
 AERIAL PHOTOS OF 15 JUNE, 4 JULY,  
 AND 2 SEPTEMBER.

IIIR III

9 NOVEMBER 1944

CLASSIFICATION CHANGED TO  
 RESTRICTED IN COMBAT AREAS



HORIZONTAL SCALE  
 1:5300

0 250 500 Yds.

- #16 Width: 70 yards  
 Terraces: Two, #1 in shifting sand (might consist of two or more small steps), #2 at rear of beach is cut by drainage lines from airfield runoff and improved by AT ditch at bottom.  
 Terrain Inland: Brush on edge of airfield. Most gradual approach to airfield. Very few knolls. Devoid of trenches, because of location in airfield drainage area. Highest ground 240' (airfield).  
 Exits: None. Gullies can be made into exits.  
 Gradient: 1 to 7.3
- #15 Width: 80 yards  
 Terraces: Two, #1 in shifting sand (might consist of two or more small steps), #2 at rear of beach is cut by drainage lines from airfield runoff and improved by AT ditch at bottom.  
 Terrain Inland: Brush growing on airfield fill. After clearing last terrace the slope is generally uniform except for small knolls (5'-15') and the airfield embankment. Extensive trench systems in area, some foxholes built up so as to prove an obstacle to motorized equipment. Highest ground 240' (airfield).  
 Exits: Possibilities exist in gullies in #2 terrace.  
 Gradient: 1 to 6.5
- #14 Width: 80 yards  
 Terraces: Two, #1 in shifting sand (might consist of two or more small steps), #2 at rear of beach is improved by AT ditch at bottom.  
 Terrain Inland: Brush growing on airfield fill. Slope broken by rocky knolls (5'-15') and built up foxholes that may prove to be obstacle to motorized equipment. Highest ground 240' (airfield).  
 Gradient: 1 to 6.7
- #13 Width: 80 yards  
 Terraces: Two, #1 in shifting sand (might consist of two or more small steps), #2 at rear of beach, improved AT ditch at bottom.  
 Terrain Inland: Brush growing on airfield fill. Slope broken by small woods. Earthworks behind #2 terrace reach obstacle proportions. Highest ground 240' (airfield).  
 Gradient: 1 to 6.5
- #12 Width: 70 yards  
 Terraces: Two, #1 in shifting sand (at times consisting of several small steps), #2 just behind beach.  
 Terrain Inland: Only vegetation is brush growing on airfield fill. Rocky knolls. Drainage area from airfield, consequently few trenches. Highest ground 240' (airfield). Last 25' very steep.  
 Exits: One possible in deep gully thru #2 terrace.  
 Gradient: 1 to 6.1
- #11 Width: 70 yards  
 Terraces: Two, #1 in shifting sand (at times consisting of several small steps), #2 just behind beach.  
 Terrain Inland: Several brush covered hills. Cultivated fields south of airfield. Houses. Trench systems in depth. Highest ground 255'.  
 Exits: One unsurfaced 16'-18' road.  
 Gradient: 1 to 5.9
- #10 Width: 80 yards  
 Terraces: Two, #1 in shifting sand (at times consisting of several small steps), #2 just behind beach being improved with AT ditch.  
 Terrain Inland: Small brush covered hills. Cultivated fields south of #1 airfield. Houses. Trench systems in depth. Highest ground 250'.  
 Gradient: 1 to 4.4
- #9 Width: 80 yards  
 Terraces: Three, #1 in shifting sand (at times consisting of several small steps), #2 just behind beach being improved with AT ditch, #3 behind #2.  
 Terrain Inland: Several brush covered small hills. Rocky knolls. Cultivated fields south of #1 airfield. Highest ground 250'. Trench systems in depth. Houses.  
 Gradient: 1 to 5.7
- #8 Width: 80 yards  
 Terraces: Three, #1 in shifting sand (at times consisting of several small steps), #2 just behind beach being improved with AT ditch, #3 between #2 and railroad.  
 Terrain Inland: Several brush covered small hills. Rocky knolls. Highest ground 245'. Trench systems in depth. Houses.  
 Gradient: 1 to 5.2
- #7 Width: 90 yards  
 Terraces: Three, #1 and #2 in shifting sand (#1 at times consists of several small steps), #3 between beach and railroad.  
 Terrain Inland: Several brush covered small hills. Rocky knolls. Highest ground 188'. Trench systems in depth.  
 Gradient: 1 to 9.5
- #6 Width: 90 yards  
 Terraces: Three, #1 and #2 in shifting sand (#1 at times consists of several small steps), #3 between beach and railroad.  
 Terrain Inland: Several small brush patches. Rocky knolls. Several 10 to 15 foot hills. Highest ground 188'. Trench systems in depth.  
 Gradient: 1 to 10.7
- #5 Width: 100 yards  
 Terraces: Three, #1 and #2 in shifting sand, (#1 at times consists of several small steps), #3 being improved with AT ditch, #3 between beach and narrow gauge railroad.  
 Terrain Inland: No vegetation. Rocky knolls. Highest ground 175'. Trench systems in depth.  
 Gradient: 1 to 10.7
- #4 Width: 115 yards  
 Terraces: Three, #1 and #2 in shifting sand, (#1 at times consists of several steps), #3 between beach and narrow gauge railroad.  
 Terrain Inland: No vegetation. Rocky knolls. Highest ground 155'. Trench systems in depth.  
 Gradient: 1 to 10.6
- #3 Width: 140 yards  
 Terraces: Three, #1 and #2 in shifting sand, #3 lies between beach and narrow gauge railroad.  
 Terrain Inland: No vegetation. Rocky knolls. Highest ground 135'. Trench systems in depth.  
 Gradient: 1 to 11.1
- #2 Width: 150 yards  
 Terraces: Four, #1 and #2 in shifting sand, #3 and #4 between rear of beach and narrow gauge railroad.  
 Terrain Inland: No vegetation. Small rocky knoll. Highest ground approximately 124'. Trench systems in depth.  
 Gradient: 1 to 9.8
- #1 Width: 150 yards  
 Terraces: Four, #1 and #2 in shifting sand, #3 behind beach, #4 just to seaward of narrow gauge railroad.  
 Terrain Inland: No vegetation. Small rocky knoll. Highest ground approximately 110'. Trench systems in depth.  
 Gradient: 1 to 12.9

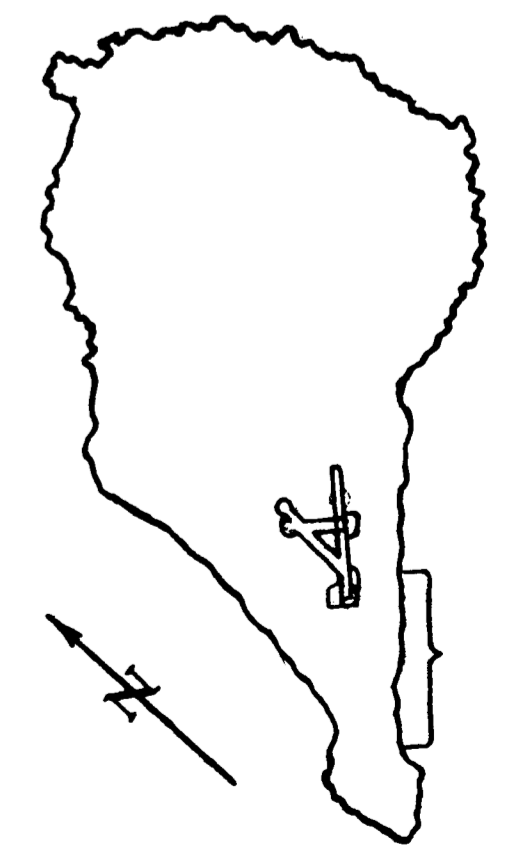
VERTICAL EXAGGERATION APPROXIMATELY 4x  
 APPROXIMATE VERTICAL SCALE: 1 SQUARE = 10 FEET  
 SAND LIMITS

BEACH STUDY - EAST BEACHES

- GREEN 1:**  
 Beach Extent: 500 yards long. Width varies from 150 yards at left flank to 80 yards at right flank.  
 Exits: None for wheeled vehicles. Tracked vehicles can probably make the grade in center of the beach.
- RED 1:**  
 Beach Extent: 500 yards long. Width varies from 80 yards on left flank to 75 yards on right flank.  
 Exits: None for wheeled vehicles. Tracked vehicles can probably leave beach at any point.  
 Obstacle: FUTATSU on right flank 315 yards off shore.
- RED 2:**  
 Beach Extent: 500 yards long. Width varies from 75 yards on left flank to 60 yards on right flank.  
 Exits: One unsurfaced 16'-18' road on left flank. Possible exits through drainage gullies.  
 Obstacles: FUTATSU on left flank.

**GENERAL OBSERVATIONS:**  
 Beaches composed of shifting volcanic sand. Steep slope to seaward from water line. Bottom not visible. Beach sand terraces vary from day to day-parts of terraces will be leveled by bombardment. Terraces behind the beach are more formidable. They are higher than the sand terraces and appear to be composed of crumbling volcanic rock. The sand should not prove an obstacle to tracked vehicles. Wheeled vehicles will probably need mats. There are few wheeled vehicle exits. No boat obstacles observed (exception: FUTATSU, natural obstacle of 3 rocks 315 yards offshore between RED 1 and RED 2.) There is a double row of possible mines just above the high water mark on all three beaches. Current sets to north. Average gradient for each cross section is figured from water line to highest point-or if there are two somewhat similar high points, to the one nearest water's edge.

**NOTE:** Study based on interpretation of aerial photos of 15 June, 4 July and 2 September.



TOP SECRET  
 CLASSIFICATION CHANGED TO  
 RESTRICTED IN COMBAT AREAS