JANIS 155

Volume No. 4 of 4

~~Confidential~~

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JOINT ARMY-NAVY INTELLIGENCE STUDY

OF

Celebes Sea Area (Plans)

JOINT INTELLIGENCE STUDY PUBLISHING BOARD

May · 1944

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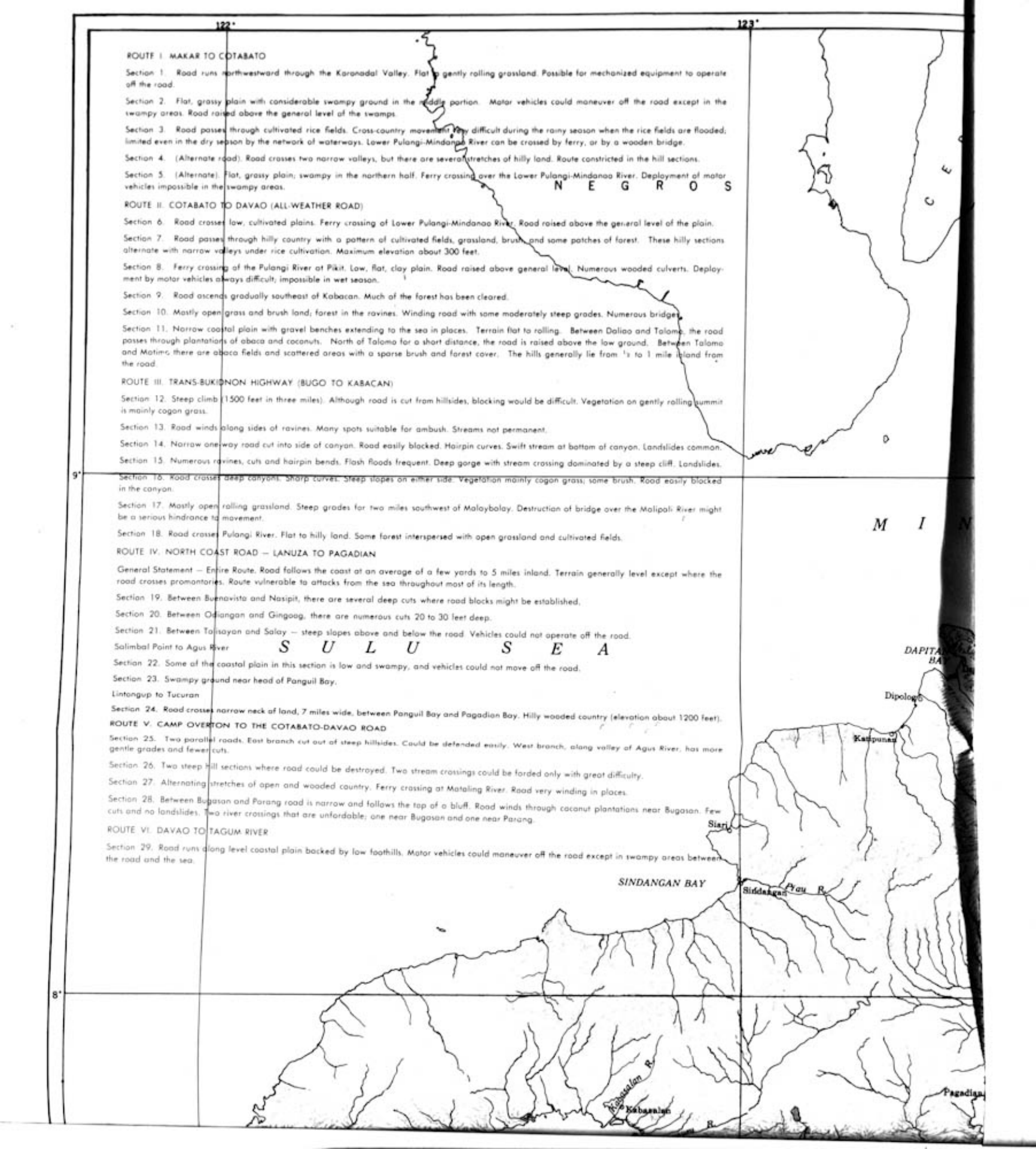
(Continued on reverse)

PLAN 1 JANIS No. 155 [redacted]

MINDANAO—Physiography and strategic routes



ROUTE I. MAKAR TO COTABATO

Section 1. Road runs northwestward through the Koronadal Valley. Flat to gently rolling grassland. Possible for mechanized equipment to operate off the road.

Section 2. Flat, grassy plain with considerable swampy ground in the middle portion. Motor vehicles could maneuver off the road except in the swampy areas. Road raised above the general level of the swamps.

Section 3. Road passes through cultivated rice fields. Cross-country movement very difficult during the rainy season when the rice fields are flooded; limited even in the dry season by the network of waterways. Lower Pulangi-Mindanao River can be crossed by ferry, or by a wooden bridge.

Section 4. (Alternate road). Road crosses two narrow valleys, but there are several stretches of hilly land. Route constricted in the hill sections.

Section 5. (Alternate). Flat, grassy plain; swampy in the northern half. Ferry crossing over the Lower Pulangi-Mindanao River. Deployment of motor vehicles impossible in the swampy areas.

ROUTE II. COTABATO TO DAVAO (ALL-WEATHER ROAD)

Section 6. Road crosses low, cultivated plains. Ferry crossing of Lower Pulangi-Mindanao River. Road raised above the general level of the plain.

Section 7. Road passes through hilly country with a pattern of cultivated fields, grassland, brush, and some patches of forest. These hilly sections alternate with narrow valleys under rice cultivation. Maximum elevation about 300 feet.

Section 8. Ferry crossing of the Pulangi River at Pikit. Low, flat, clay plain. Road raised above general level. Numerous wooded culverts. Deployment by motor vehicles always difficult; impossible in wet season.

Section 9. Road ascends gradually southeast of Kabacan. Much of the forest has been cleared.

Section 10. Mostly open grass and brush land; forest in the ravines. Winding road with some moderately steep grades. Numerous bridges.

Section 11. Narrow coastal plain with gravel benches extending to the sea in places. Terrain flat to rolling. Between Daliao and Talomo, the road passes through plantations of abaca and coconuts. North of Talomo for a short distance, the road is raised above the low ground. Between Talomo and Matina there are abaca fields and scattered areas with a sparse brush and forest cover. The hills generally lie from ½ to 1 mile inland from the road.

ROUTE III. TRANS-BUKIDNON HIGHWAY (BUGO TO KABACAN)

Section 12. Steep climb (1500 feet in three miles). Although road is cut from hillsides, blocking would be difficult. Vegetation on gently rolling summit is mainly cogon grass.

Section 13. Road winds along sides of ravines. Many spots suitable for ambush. Streams not permanent.

Section 14. Narrow one-way road cut into side of canyon. Road easily blocked. Hairpin curves. Swift stream at bottom of canyon. Landslides common.

Section 15. Numerous ravines, cuts and hairpin bends. Flash floods frequent. Deep gorge with stream crossing dominated by a steep cliff. Landslides.

Section 16. Road crosses deep canyons. Sharp curves. Steep slopes on either side. Vegetation mainly cogon grass; some brush. Road easily blocked in the canyon.

Section 17. Mostly open, rolling grassland. Steep grades for two miles southwest of Malaybalay. Destruction of bridge over the Malipali River might be a serious hindrance to movement.

Section 18. Road crosses Pulangi River. Flat to hilly land. Some forest interspersed with open grassland and cultivated fields.

ROUTE IV. NORTH COAST ROAD — LANUZA TO PAGADIAN

General Statement — Entire Route. Road follows the coast at an average of a few yards to 5 miles inland. Terrain generally level except where the road crosses promontories. Route vulnerable to attacks from the sea throughout most of its length.

Section 19. Between Buenavista and Nasipit, there are several deep cuts where road blocks might be established.

Section 20. Between Odiangan and Gingoog, there are numerous cuts 20 to 30 feet deep.

Section 21. Between Tagsayan and Salay — steep slopes above and below the road. Vehicles could not operate off the road.

Salimbal Point to Agus River

Section 22. Some of the coastal plain in this section is low and swampy, and vehicles could not move off the road.

Section 23. Swampy ground near head of Panguil Bay.

Lintongup to Tucuran

Section 24. Road crosses narrow neck of land, 7 miles wide, between Panguil Bay and Pagadian Bay. Hilly wooded country (elevation about 1200 feet).

ROUTE V. CAMP OVERTON TO THE COTABATO-DAVAO ROAD

Section 25. Two parallel roads. East branch cut out of steep hillsides. Could be defended easily. West branch, along valley of Agus River, has more gentle grades and fewer cuts.

Section 26. Two steep hill sections where road could be destroyed. Two stream crossings could be forded only with great difficulty.

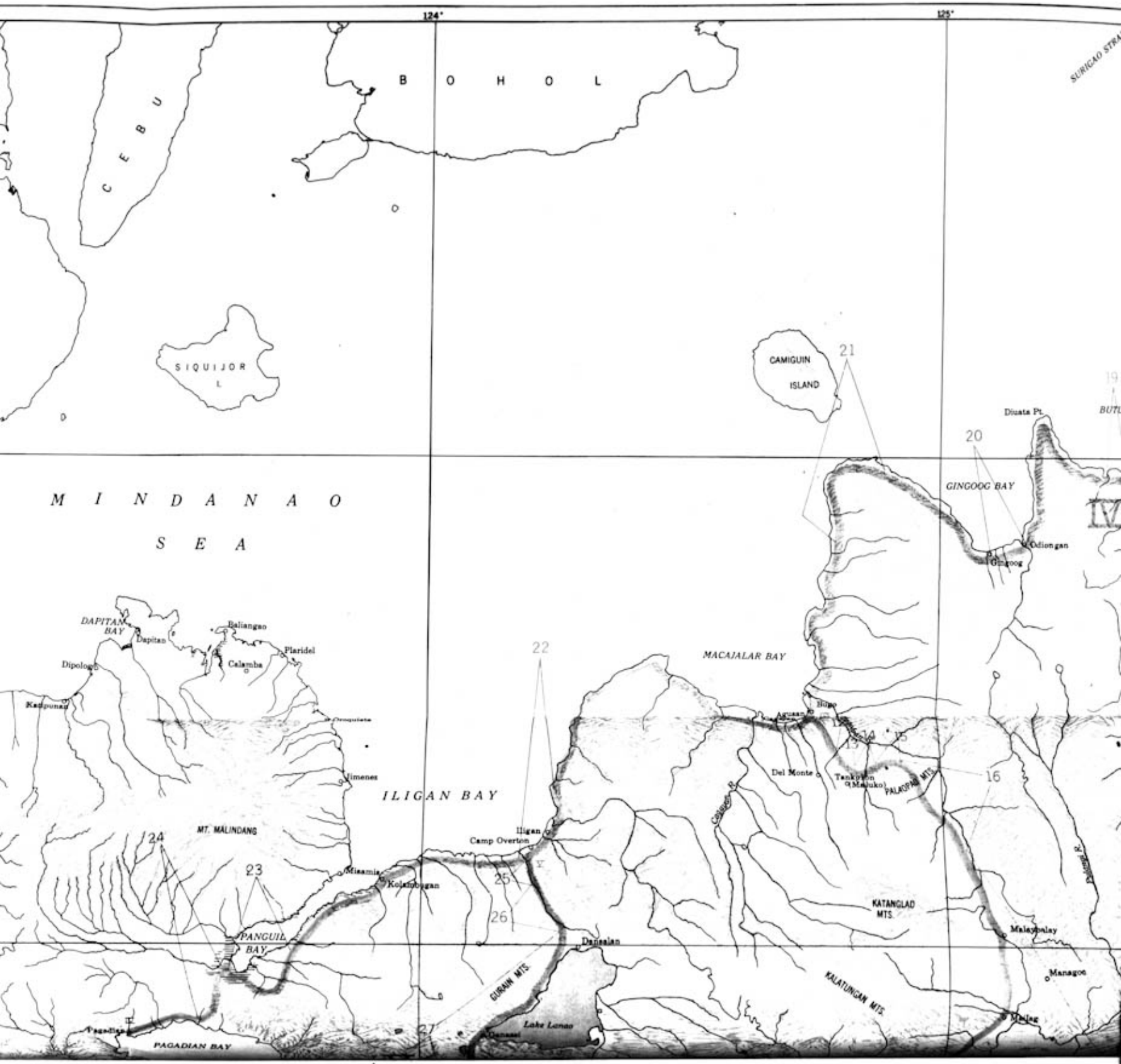
Section 27. Alternating stretches of open and wooded country. Ferry crossing at Matuling River. Road very winding in places.

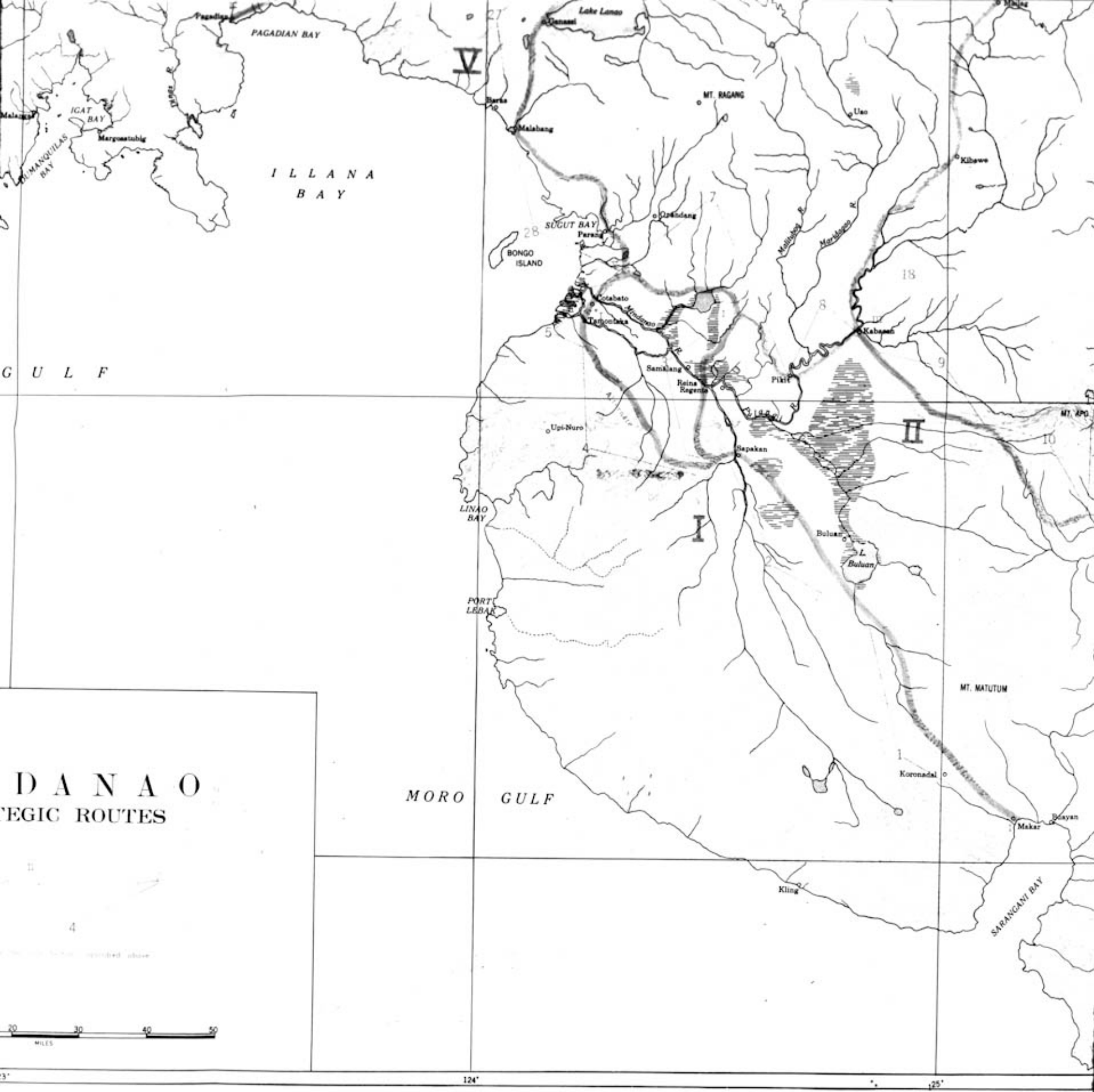
Section 28. Between Bugasan and Parang road is narrow and follows the top of a bluff. Road winds through coconut plantations near Bugasan. Few cuts and no landslides. Two river crossings that are unfordable; one near Bugasan and one near Parang.

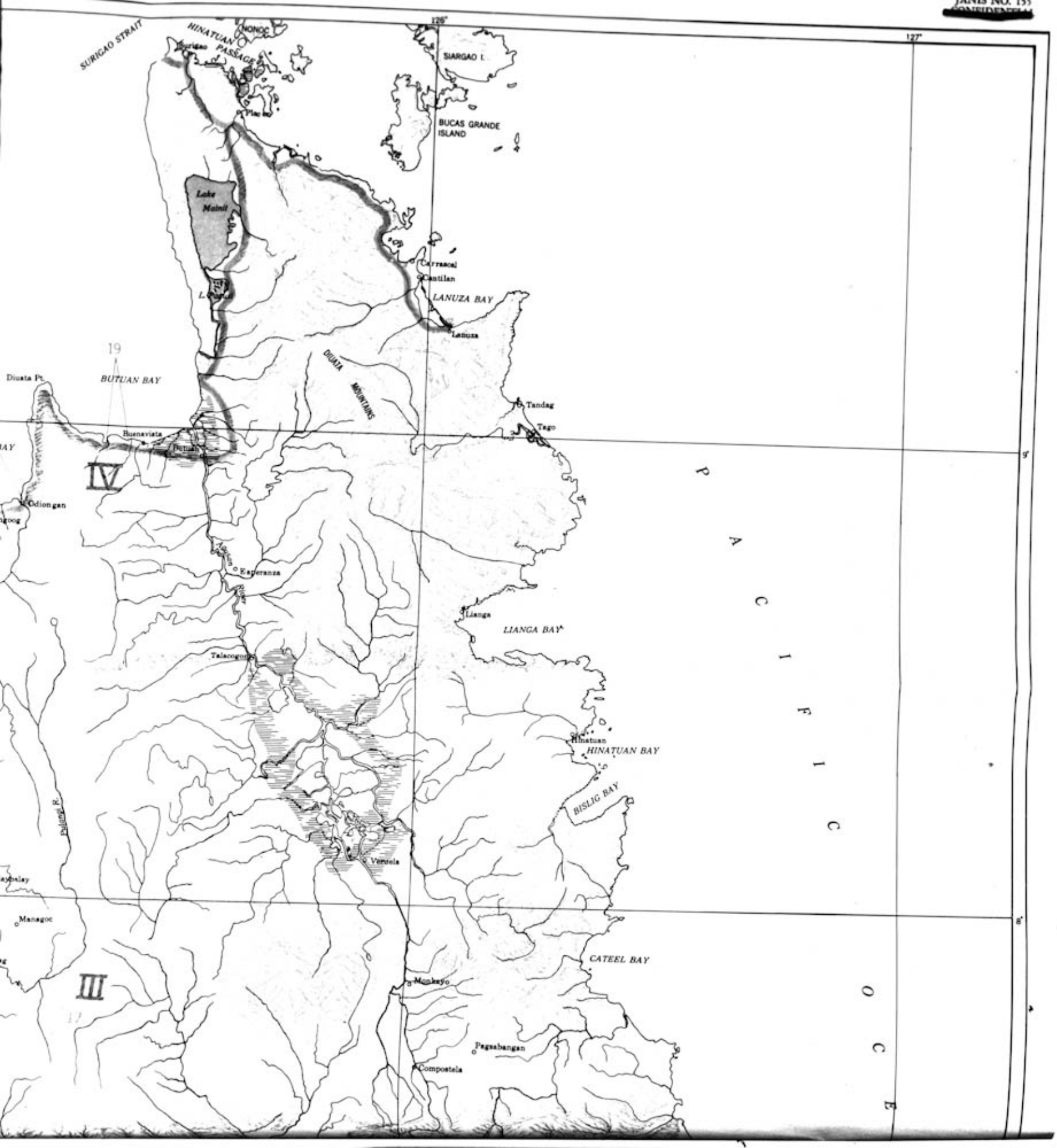
ROUTE VI. DAVAO TO TAGUM RIVER

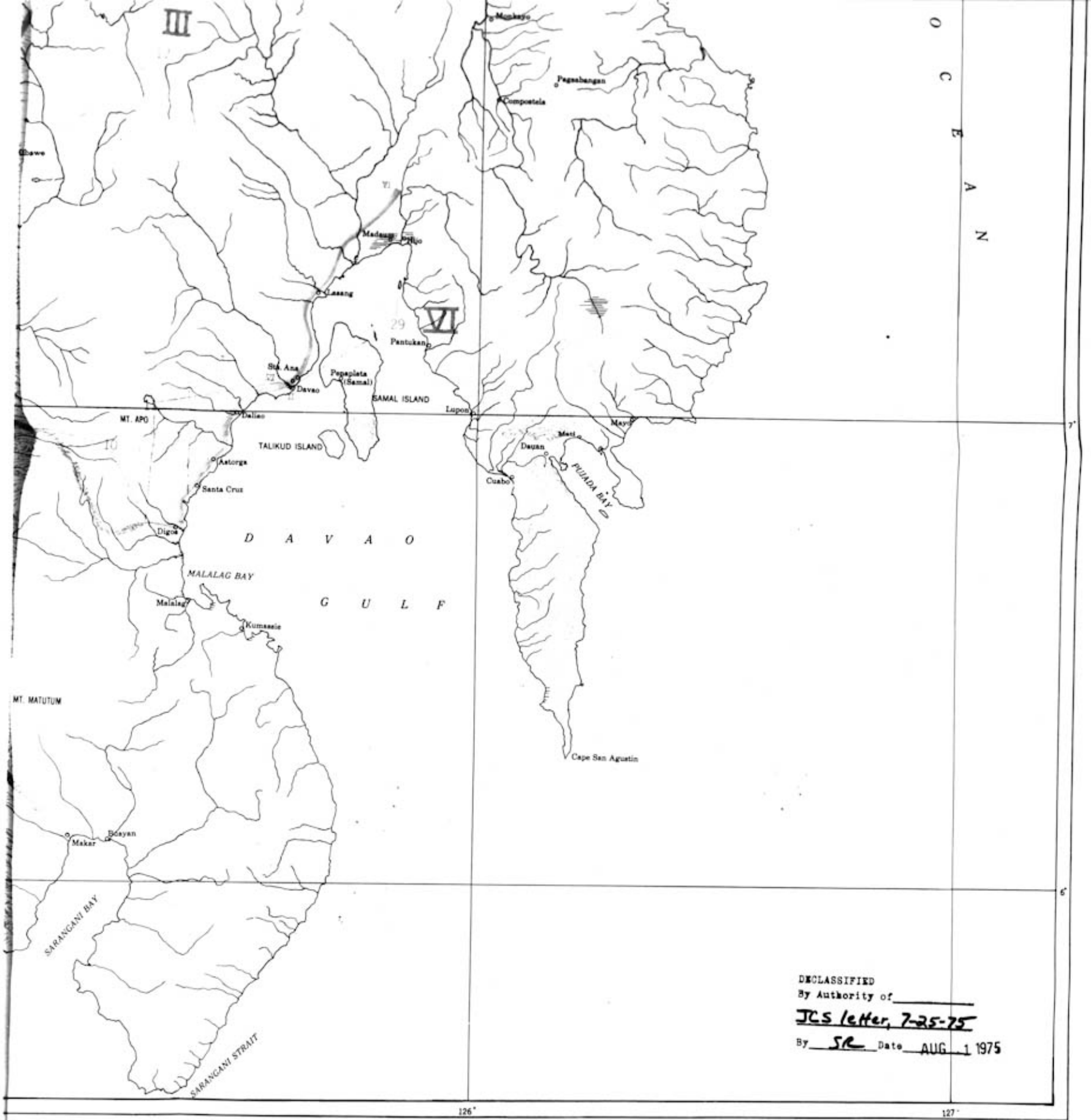
Section 29. Road runs along level coastal plain backed by low foothills. Motor vehicles could maneuver off the road except in swampy areas between the road and the sea.


SIBUGUEY BAY
IGAT BAY
Malangas
Margosatubig
SUMANQUILAS BAY
Vitali
Labuan
Bolong
MORO GULF
Taluksangay
Zamboanga
BASILAN STRAIT
Isabela
Lamitan
BASILAN ISLAND
CELEBES SEA
7°
6°
122°
123°
MINDANAO
STRATEGIC ROUTES
1
2
3
4
Numbers refer to Routes and Sections described above
0
10
20
30
40
MILES


124°
125°
B O H O L
C E B U
SIQUIJOR
L
CAMIGUIN
ISLAND
21
Diuata Pt.
20
GINGOOG BAY
Odiongan
Gingoog
M I N D A N A O
S E A
DAPITAN
BAY
Dapitan
Baliangao
Plaridel
Calamba
Dipolog
Katipunan
Sinquiata
Jimenes
ILIGAN BAY
22
MACAJALAR BAY
Hilao
Agusan
13
14
15
16
Del Monte
Tankulan
(Manolo)
PALAKPAK MTS.
Cagayan R.
MT. MALINDANG
24
23
Iligan
Camp Overton
Misamis
Kolambugan
25
26
PANGUIL
BAY
Dansalan
KATANGLAD
MTS.
Malaybalay
Managoc
GINAIN MTS.
KALATUNGAN MTS.
Lake Lanao
Danasel
Malaig
27
Pagadian
PAGADIAN BAY


PAGADIAN BAY
Pagadian
Lake Lanao
Dansalan
Malabang
MT. RAGANG
Uso
Kibawe
IGAT BAY
Margosatubig
ILLANA BAY
SUGUT BAY
Parang
Cotabato
Tamontaka
Kabasan
BONGO ISLAND
Malitbog R.
Mordigan R.
Pikit
Reina Regente
Upi-Nuro
Sapakan
MT. APO
LINAO BAY
Buluan
L. Buluan
PORT LEBAK
MT. MATUTUM
Koronadal
Makar
Kling
SARANGANI BAY
MORO GULF
I
II
V
DANAO
TEGIC ROUTES
MILES
124°
125°


SURIGAO STRAIT
HINATUAN PASSAGE
NONOC
Surigao
Placer
SIARGAO I.
BUCAS GRANDE ISLAND
Lake Mainit
Carrascal
Cantilan
LANUZA BAY
Lanuza
DIWATA MOUNTAINS
Tandag
Tago
Diuata Pt.
BUTUAN BAY
Buenavista
Butuan
IV
Odiongan
Esperanza
Lianga
LIANGA BAY
Talacogon
Hinatuan
HINATUAN BAY
BISLIG BAY
Paloma R.
Veruela
Managoc
III
CATEEL BAY
Monkayo
Pagsabangan
Compostela
PACIFIC OCEAN
126°
127°
9°
8°
19



PLAN 2 JANIS No. 155 [redacted]L

CELEBES SEA AREA—Vegetation

CELEBES SEA AREA
VEGETATION

- Rain Forest
- Moss Forest
- Grassland
- Grass and Forest
- Swamp
- Cultivated and Scattered Fields (including areas of secondary growth)
- Plantations (coconut, abaca and pineapple)

- State and Division Boundary
- International Boundary
- Boundary of Janis 155

10 0 10 20 30 0 50 60 70 80 90 100 110 120 130
STATUTE MILES

20 0 20 40 60 80 100 120 140 160 180
NAUTICAL MILES

10 0 10 20 30 40 50 60 70 80 90 100
KILOMETERS

Mercator Projection *Scale at Parallel 7°*

114° 116° 118° 120° 10° 8° 6° 4°

SOUTH CHINA SEA

SULU

NORTH BORNEO WEST OF MAIN DRAINAGE DIVIDE.
Swamp forest with clumps of sago palms and the Ni[pa] palm. Coconuts along [illegible] with luxuriant forests, and short forested spurs extend to coast north of Jesselton. Grass areas, cultivated patches in rice and corn, and plantations of rubber and tobacco in valleys. Much scrub growth on abandoned clearings. Mangrove swamps where rivers enter the sea.

NORTHEAST COASTAL REGION.
Greatest portion in rain forest. Mangrove and nipa swamps border [illegible] at mouths of rivers. Sago palms on the river banks and [illegible] gish streams where they merge into swamp forests. Coconut trees along smooth flat stretches of coast. Plantations, scattered native fields, patches of grass and secondary growth extend inland.

Jesselton

KIMANIS BAY

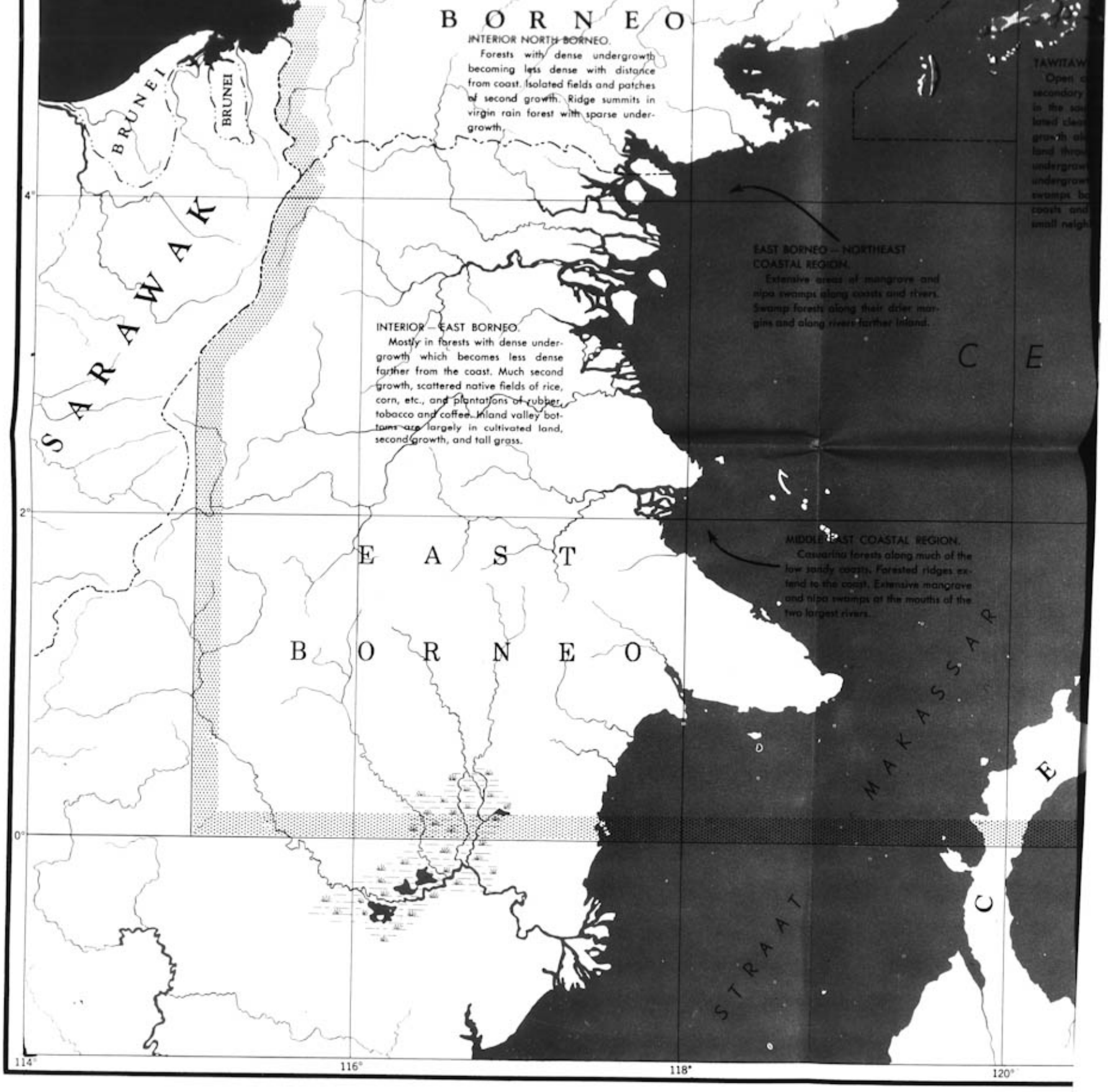
NORTH BORNEO

BRUNEI

BRUNEI

INTERIOR NORTH BORNEO.
Forests with dense undergrowth becoming less dense with distance from coast. Isolated fields and patches of second growth. Ridge summits in virgin rain forest with sparse undergrowth.

TAWITAWI ISL
Open cultiva
secondary gro
in the southern
lated cleared
growth along
land through
undergrowth
undergrowth.


BORNEO
INTERIOR NORTH BORNEO.
Forests with dense undergrowth becoming less dense with distance from coast. Isolated fields and patches of second growth. Ridge summits in virgin rain forest with sparse undergrowth.
BRUNEI
BRUNEI
SARAWAK
EAST BORNEO — NORTHEAST COASTAL REGION.
Extensive areas of mangrove and nipa swamps along coasts and rivers. Swamp forests along their drier margins and along rivers farther inland.
INTERIOR — EAST BORNEO.
Mostly in forests with dense undergrowth which becomes less dense farther from the coast. Much second growth, scattered native fields of rice, corn, etc., and plantations of rubber, tobacco and coffee. Inland valley bottoms are largely in cultivated land, second growth, and tall grass.
MIDDLE EAST COASTAL REGION.
Casuarina forests along much of the low sandy coasts. Forested ridges extend to the coast. Extensive mangrove and nipa swamps at the mouths of the two largest rivers.
EAST
BORNEO
MAKASSAR
STRAAT
4°
2°
0°
114°
116°
118°
120°

SEA AREA
ATION

Swamp

Cultivated and Scattered Fields
(including areas of secondary growth)

Plantations
(coconut, abaca and pineapple)

70 80 90 100 110 120 130
MILES
100 120 140 160 180
MILES
60 70 80 90 100
ERS
Scale at Parallel 7°

118° 120° 122° 124°

10° 8°

SULU SEA

MINDANAO

NORTHEAST COASTAL REGION.
...atest portion in rain forest. ...nipa swamps border ... gish streams where they merge into swamp forests. Coconut trees along smooth flat stretches of coast. Plantations, scattered native fields, patches of grass and secondary growth extend inland.

BASILAN ISLAND.
Forests cover over half the island. Considerable native cultivation and ... the northern and eastern parts. Scattered cultivation on south side. Mangrove swamps locally along the south and east coasts.

JOLO ISLAND.
Largely in orderly cultivation or in grass land and patches of secondary growth formerly cultivated. Most intensive cultivation around Jolo, Maimbung and Parang. Minor areas of mountain and hill country remain in forest.

Jolo
Parang
Maimbung

TAPUL ISLAND GROUP.
Open fields and groves of tropical fruits in orderly arrangement. Back country in plantations, grass land or second growth.

SULU ARCHIPELAGO

TAWITAWI ISLAND.
Open cultivated fields, grass and secondary growth around Bolimbing in the southern part. Elsewhere isolated cleared spaces amid secondary growth along the coast, grading inland through rain forest with dense undergrowth to forests with sparse

R T H

N E O

BORNEO.
...ense undergrowth ...nse with distance ... fields and patches ... Ridge summits in ...ith sparse under-


SULU ARCHIPELAGO
TAWITAWI ISLAND
Open cultivated fields, grass and secondary growth around Bolimbing in the southern part. Elsewhere isolated cleared spaces and secondary growth along the coast, grading inland through rain forest with dense undergrowth to forests with sparse undergrowth. Mangrove and nipa swamps border the south and east coasts and many of the numerous small neighboring islands.
CELEBES SEA
SANGIHE EILANDEN
MIDDLE EAST COASTAL REGION.
Casuarina forests along much of the low sandy coasts. Forested ridges extend to the coast. Extensive mangrove and nipa swamps at the mouths of the two largest rivers.
CELEBES, INTERIOR OF NORTHERN PENINSULA.
Rain forests cover the interior. Coastal plains include limited areas of cultivation and second growth.
MINAHASA — WEST SIDE.
Coastal plains and foothills covered with grass in most places. Some rain forests with sparse undergrowth on mountain slopes. Considerable cultivation of rice, corn, coconuts, rubber, and tobacco on flat or rolling lands.
MAKASSAR
CELEBES
Randangan R.
Tondano L.
Mangrove and nipa swamps on the Delta of Randangan river and farther inland. Similar smaller areas elsewhere along the coast.
MINAHASA — EAST SIDE.
Comparatively dry forests. Cultivated areas and grass lands formerly cultivated on flat areas and extending up the mountain slopes. Cultivated lands and grass lands. Rice paddy fields extend around Tondano Lake.
BATJAN ISLAND GROUP.
Forested islands. Forests extend to shores where coast is rugged and steep. Coconut groves along flat coasts. Plantations around Labuaha and sago swamps farther inland. Mangroves on east side of Soanbai Bi
120°
122°
124°


124°
126°
128°
130°
10°
8°
6°
4°
N O R T H
P A C I F I C
O C E A N
M I N D A N A O
BASILAN ISLAND.
Forests cover over half the island.
TALAUD ISLANDS.
Dense rain forest. Coconut trees
TALAUD ERANDEN


SEA
SANGIHE EILANDEN
MINAHASA — WEST SIDE.
Coastal plains and foothills covered with grass in most places. Some rain forests with sparse undergrowth on mountain slopes. Considerable cultivation of rice, corn, coconuts, rubber, and tobacco on flat or rolling lands.
Tondano L.
MINAHASA — EAST SIDE.
Comparatively dry forests. Cultivated areas and grass lands formerly cultivated on flat areas and extending up the mountain slopes. Cultivated lands and grass lands. Rice paddy fields extend around Tondano Lake.
B
E
S
and farther
BATJAN ISLAND GROUP.
Forested islands. Forests extend to shores where coast is rugged and steep. Coconut groves along flat coasts. Plantations around Labuha and sago swamps farther inland. Mangroves on east side of Soembaki B.
SANGIHE ISLANDS.
Coastal groves and plantations along the coasts. Native fields or clearings with second growth inland. Rain forests in the interiors. Mangrove swamps on sheltered coasts.
NORTHERN PENINSULA—WEST SIDE.
Coconut groves along shores, except for small areas of flats and plantations inland, and also sparsely areas of coconut groves, fields, grass, and second growth from Djailolo to Sahou.
CENTRAL HALMAHERA.
Coconut groves along shores north of Akelamo Swamp north of village. Swamps along coasts further south with coconuts on inland margins. Dense forests inland.
VOLCANIC ISLANDS.
Native villages and fields dot the coastal regions and are more scattered inland. East side of Ternate most highly cultivated. Dense forests and second growth on mountain slopes. Mangroves common on east coasts.
HALMAHERA
Ternate
Tidore
Djailolo
Sahou
Ibou
Boeli-Serani
Akelamo
Labuha
MOROTAI ISLAND.
Coconut groves fringe the north and west coasts with mangrove swamps at river mouths. Dense forests throughout interior with bamboo along streams.
NORTHERN PENINSULA—EAST SIDE.
Coconut groves, fields, second growth and grass land around Kasiruta, Tobelo, and Galela. Many native paths. Dense rain forests inland with bamboo thickets along streams. Grassy slope and coconuts along coast.
NORTHEASTERN PENINSULA.
Dense rain forests of the interior extend to the shores except for a few stretches lined with coconut groves on the northeast coast, around Boeli-Serani, and along Kasoe Bay.
SOUTHEASTERN PENINSULA.
Rain forests extend to the eastern shores. Coconut groves and mangrove swamps along the southern and northern coasts.
SOUTHERN PENINSULA.
Coconut trees and groves border most of the coast. Plantations, native clearings, and second growth forest around the larger settlements on coast of northern part of the peninsula. Dense rain forests throughout interior.
4°
2°
0
124°
126°
128°
130°

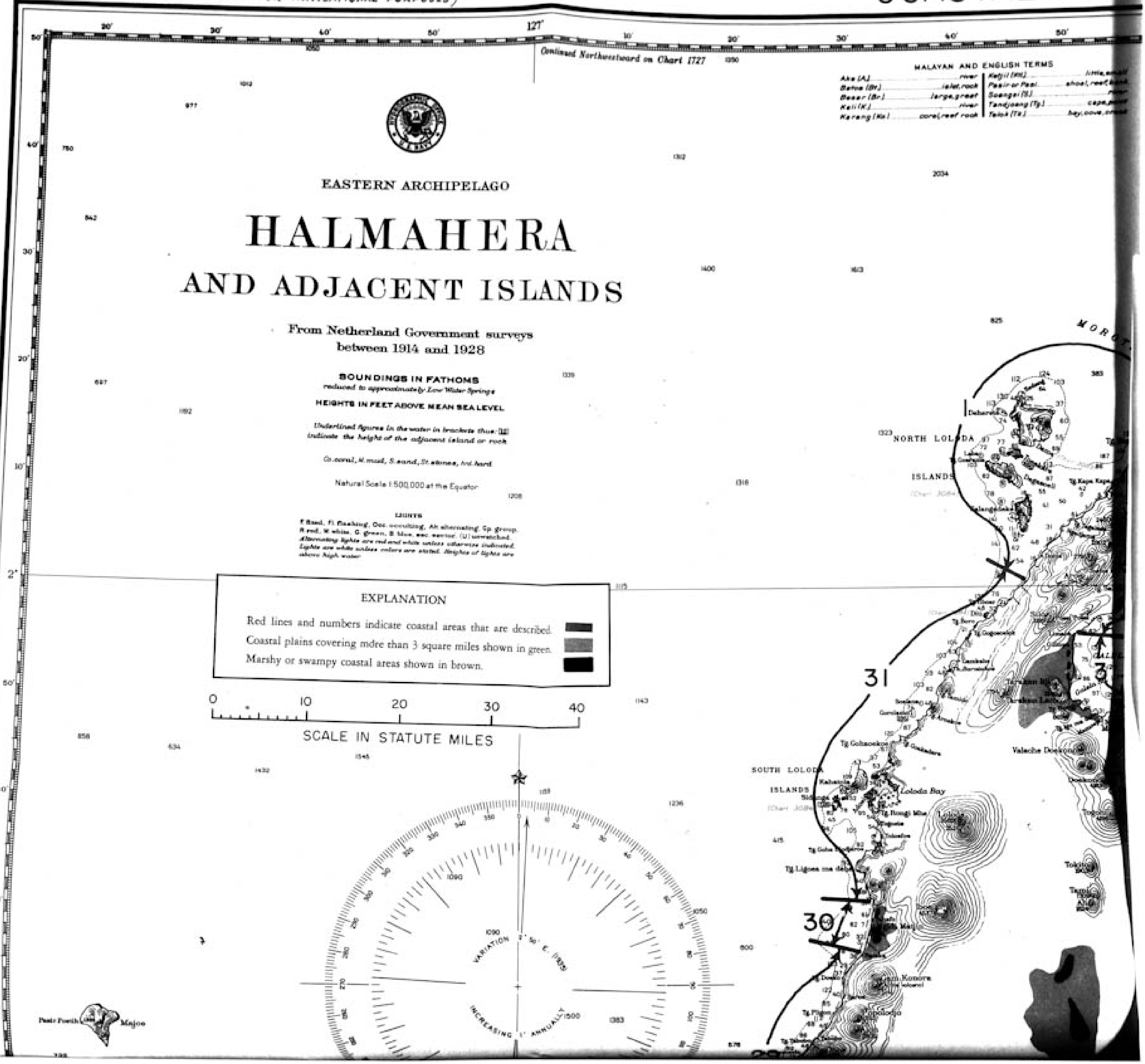
This oversized item has been
filmed in sections

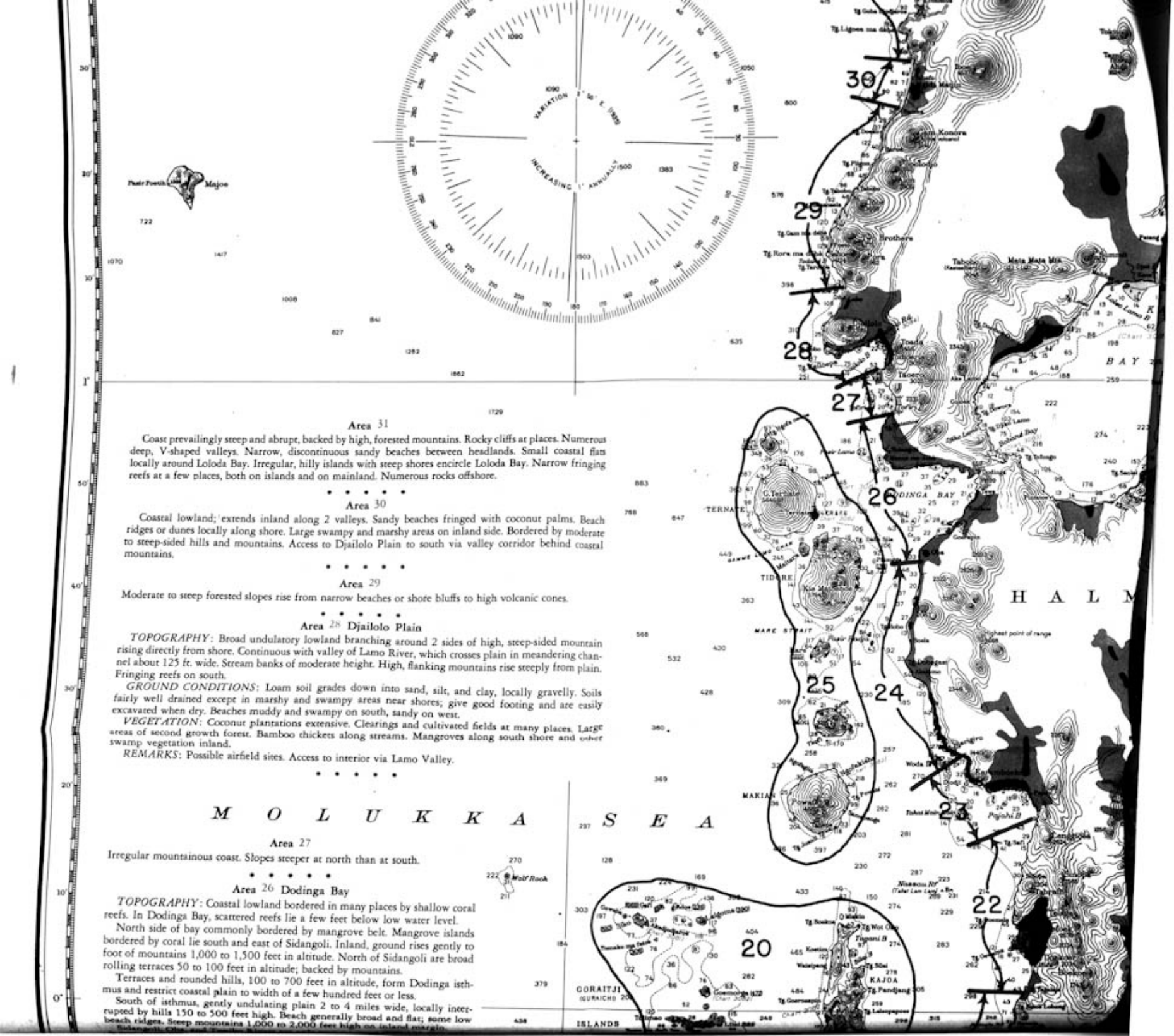
PLAN 3 JANIS No. 155 [redacted]

HALMAHERA—Coastal terrain
HO 3080

(NOT TO BE USED FOR NAVIGATIONAL PURPOSES)

COASTAL TER





Area 31

Coast prevailingly steep and abrupt, backed by high, forested mountains. Rocky cliffs at places. Numerous deep, V-shaped valleys. Narrow, discontinuous sandy beaches between headlands. Small coastal flats locally around Loloda Bay. Irregular, hilly islands with steep shores encircle Loloda Bay. Narrow fringing reefs at a few places, both on islands and on mainland. Numerous rocks offshore.

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Area 30

Coastal lowland; extends inland along 2 valleys. Sandy beaches fringed with coconut palms. Beach ridges or dunes locally along shore. Large swampy and marshy areas on inland side. Bordered by moderate to steep-sided hills and mountains. Access to Djailolo Plain to south via valley corridor behind coastal mountains.

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Area 29

Moderate to steep forested slopes rise from narrow beaches or shore bluffs to high volcanic cones.

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Area 28 Djailolo Plain

TOPOGRAPHY: Broad undulatory lowland branching around 2 sides of high, steep-sided mountain rising directly from shore. Continuous with valley of Lamo River, which crosses plain in meandering channel about 125 ft. wide. Stream banks of moderate height. High, flanking mountains rise steeply from plain. Fringing reefs on south.

GROUND CONDITIONS: Loam soil grades down into sand, silt, and clay, locally gravelly. Soils fairly well drained except in marshy and swampy areas near shores; give good footing and are easily excavated when dry. Beaches muddy and swampy on south, sandy on west.

VEGETATION: Coconut plantations extensive. Clearings and cultivated fields at many places. Large areas of second growth forest. Bamboo thickets along streams. Mangroves along south shore and other swamp vegetation inland.

REMARKS: Possible airfield sites. Access to interior via Lamo Valley.

• • • • •

Area 27

Irregular mountainous coast. Slopes steeper at north than at south.

• • • • •

Area 26 Dodinga Bay

TOPOGRAPHY: Coastal lowland bordered in many places by shallow coral reefs. In Dodinga Bay, scattered reefs lie a few feet below low water level.

North side of bay commonly bordered by mangrove belt. Mangrove islands bordered by coral lie south and east of Sidangoli. Inland, ground rises gently to foot of mountains 1,000 to 1,500 feet in altitude. North of Sidangoli are broad rolling terraces 50 to 100 feet in altitude; backed by mountains.

Terraces and rounded hills, 100 to 700 feet in altitude, form Dodinga isthmus and restrict coastal plain to width of a few hundred feet or less.

South of isthmus, gently undulating plain 2 to 4 miles wide, locally interrupted by hills 150 to 500 feet high. Beach generally broad and flat; some low beach ridges. Steep mountains 1,000 to 2,000 feet high on inland margin. [illegible]

Irregular mountainous coast. Slopes steeper at north than at south.

• • • • •

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South of isthmus, gently undulating plain 2 to 4 miles wide, locally interrupted by hills 150 to 500 feet high. Beach generally broad and flat; some low beach ridges. Steep mountains 1,000 to 2,000 feet high on inland margin.

Sidangoli, Oba, and Toniko Rivers are only streams more than 125 feet wide. A few small streams east of Sidangoli disappear in coastal swamps.

GROUND CONDITIONS: Clay and clay loam predominate; coarser-textured, sandy clay loam at foot of mountains. On lowland, soil grades downward into sandy silt and clay. On Dodinga Isthmus, soil 15 to 30 feet deep; hard lava rocks or coral limestone exposed locally. Isthmus and higher parts of lowland are well drained. Footing good in dry weather; deep mud when wet. Mangrove swamps and other local areas are perennially wet. Beaches are rock, coral sand, or mud.

VEGETATION: Area largely covered by second growth forest and grassland; patches of rain forest and swamp forest common, especially south of the isthmus. Swamp forest and mangrove border most of area from Tataleka village to isthmus; cover islands near Sidangoli. Coconut plantations near Sidangoli and south of Toniko River.

REMARKS: No corridors into mountains of north and central Halmahera. Topography suitable for coastwise movement; on north side of bay, trails are at mountain front back of swampy shore. Short roads over isthmus and through Sidangoli Village. Airfield site can be found on Sidangoli terraces.

• • • • •

Area 25 Volcanic Islands

TOPOGRAPHY: Volcanic cones with steep sides, deeply ravined. Narrow coastal flats at some places; locally swampy or marshy. Elsewhere land rises with moderate to steep slopes directly from narrow beaches or coastal cliffs. Narrow, fringing reefs at a few places.

On Ternate, long narrow strip of coastal plain on east, shorter strip on south. Coastal slopes moderate on east and north, steeper on south, and steepest on west. Two small lakes at south and northwest.

GROUND CONDITIONS: Lava rock at or close to surface at many places; extends down to shore on northeastern Ternate. Soil in part is stony loam several feet deep; beaches gravelly; soils well drained and give good footing, but stoniness makes excavation difficult at places.

VEGETATION: On lower slopes of larger islands, particularly on east, large areas of cultivated fields and orchards, interspersed with patches of second growth forest. Virgin forest on higher slopes, with sparser, brushy vegetation near tops of higher peaks.

REMARKS: Larger islands circled by trails, with some stretches of road; trails also up mountain sides.

• • • • •

Area 24 Coast of west-central Halmahera

TOPOGRAPHY: Narrow irregular coastal lowland, a few hundred feet to 2 miles wide; locally restricted or interrupted by rocky headlands and steep-sided hills. Lowland is flat or gently undulating; many small marshes and swamps especially at river mouths. Beach ridges common. Coastal waters clear of reef except around Woda and nearby islands or at scattered points on mainland shore. Except Lamo River, streams are less than 100 feet wide. High rugged mountains rise 1,000 to 3,000 feet behind the lowland.

REMARKS: Interior very difficult of access. Native trails along coast.

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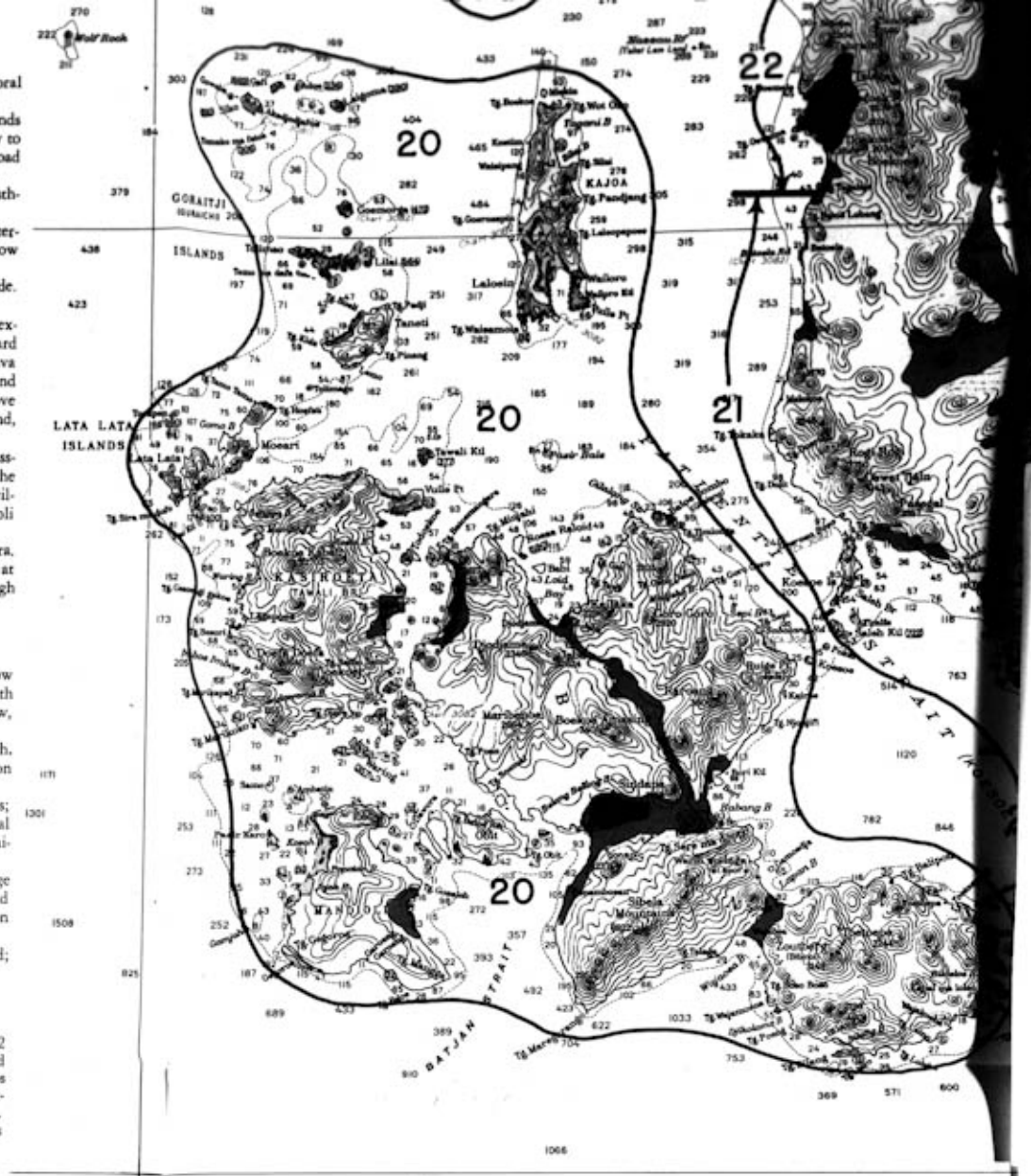
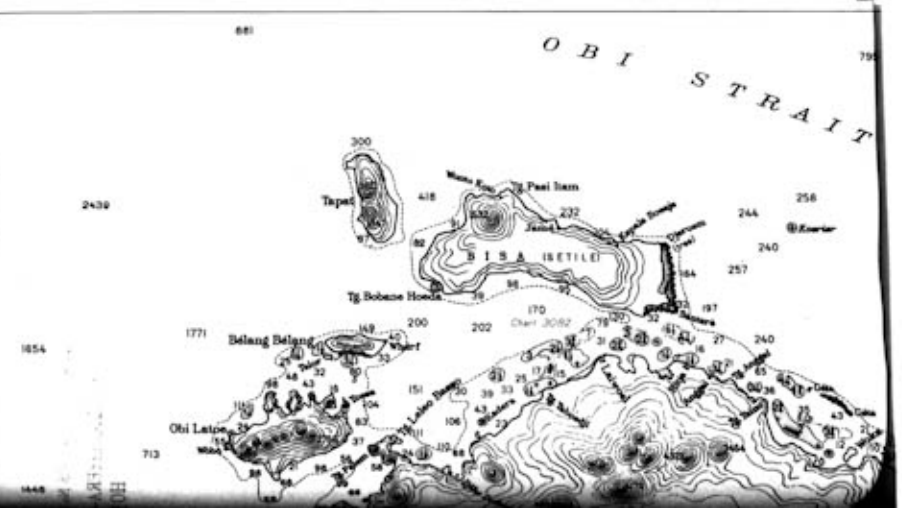




Area 23 Pajahi Plain

TOPOGRAPHY: Coastal lowland; merges inland with broad irregular river basin; bordered by rugged mountains 1,000 to 3,000 feet high. Plain 6 to 9 miles wide; extends more than 8¼ miles inland. Flat or gently undulating, generally less than 100 feet in altitude. Some low terraces near margins; interrupted by 800-foot hill at southwest corner. Coast low and marshy; extensive marshes and swamps along Rai River and its tributaries; remainder of plain fairly well-drained. Mouth of Rai more than 200 feet wide; a few other streams between 100 and 200 feet wide.

REMARKS: Short trails on east side of area; no routes across plain. Trail from Pajahi-islam follows best possible overland route to Weda Bay. Possible airfield sites on better-drained parts of plain around Pajahi-islam.

• • • • •

Area 22 Coast between Pajahi-islam and Tagalaja

TOPOGRAPHY: Narrow strip of lowland a few hundred feet to ¼ mile wide extends south nearly to Maidi village; backed by very steep mountains 1,000 to 1,500 feet high. Broad coastal plain around Maidi and Lifofa villages is surrounded by mountains. Flat or gently undulating surface largely covered by marsh; some sandy beaches of moderate width; low beach ridges locally. Tidal flats north of Lifofa village. Low coast is interrupted by hills on south side of Maidi. Maidi River is only stream more than 100 feet wide.

REMARKS: Coastwise movement generally easy. Trail from Lifofa crosses narrowest point of moun-

Area 25 Volcanic Islands

TOPOGRAPHY: Volcanic cones with steep sides, deeply ravined. Narrow coastal flats at some places; locally swampy or marshy. Elsewhere land rises with moderate to steep slopes directly from narrow beaches or coastal cliffs. Narrow, fringing reefs at a few places.

On Ternate, long narrow strip of coastal plain on east, shorter strip on south. Coastal slopes moderate on east and north, steeper on south, and steepest on west. Two small lakes at south and northwest.

GROUND CONDITIONS: Lava rock at or close to surface at many places; extends down to shore on northeastern Ternate. Soil in part is stony loam several feet deep; beaches gravelly; soils well drained and give good footing, but stoniness makes excavation difficult at places.

VEGETATION: On lower slopes of larger islands, particularly on east, large areas of cultivated fields and orchards, interspersed with patches of second growth forest. Virgin forest on higher slopes, with sparser, brushy vegetation near tops of higher peaks.

REMARKS: Larger islands circled by trails, with some stretches of road; trails also up mountain sides.

* * * * *

Area 24 Coast of west-central Halmahera

TOPOGRAPHY: Narrow irregular coastal lowland, a few hundred feet to 2 miles wide; locally restricted or interrupted by rocky headlands and steep-sided hills. Lowland is flat or gently undulating; many small marshes and swamps especially at river mouths. Beach ridges common. Coastal waters clear of reef except around Woda and nearby islands or at scattered points on mainland shore. Except Lamo River, streams are less than 100 feet wide. High rugged mountains rise 1,000 to 3,000 feet behind the lowland.

REMARKS: Interior very difficult of access. Native trails along coast.

* * * * *

Area 23 Pajahi Plain

TOPOGRAPHY: Coastal lowland; merges inland with broad irregular river basin; bordered by rugged mountains 1,000 to 3,000 feet high. Plain 6 to 9 miles wide; extends more than 8¼ miles inland. Flat or gently undulating, generally less than 100 feet in altitude. Some low terraces near margins; interrupted by 800-foot hill at southwest corner. Coast low and marshy; extensive marshes and swamps along Rai River and its tributaries; remainder of plain fairly well-drained. Mouth of Rai more than 200 feet wide; a few other streams between 100 and 200 feet wide.

REMARKS: Short trails on east side of area; no routes across plain. Trail from Pajahi-islam follows best possible overland route to Weda Bay. Possible airfield sites on better-drained parts of plain around Pajahi-islam.

* * * * *

Area 22 Coast between Pajahi-islam and Tagalaja

TOPOGRAPHY: Narrow strip of lowland a few hundred feet to ¼ mile wide extends south nearly to Maidi village; backed by very steep mountains 1,000 to 1,500 feet high. Broad coastal plain around Maidi and Lifofa villages is surrounded by mountains. Flat or gently undulating surface largely covered by marsh; some sandy beaches of moderate width; low beach ridges locally. Tidal flats north of Lifofa village. Low coast is interrupted by hills on south side of Maidi. Maidi River is only stream more than 100 feet wide.

REMARKS: Coastwise movement generally easy. Trail from Lifofa crosses narrowest point of mountain range to east coastal plain.

* * * * *

Area 21 West coast of southern peninsula

TOPOGRAPHY: Narrow strip of lowland a few hundred feet to more than a mile wide; interrupted locally by steep-sided hills and ridges. Backed by very steep mountains 1,000 feet to more than 1,500 feet high. Many small streams; few are more than 100 feet wide. Narrow sandy or rocky beaches. Saleh-lamo and Dowora-Lamo are rocky islands; slopes commonly rise directly from the sea. Other small islands off west coast are generally low and rolling; small marshes common.

REMARKS: Coastwise trails between mainland villages; several poor cross-mountain trails.

* * * * *

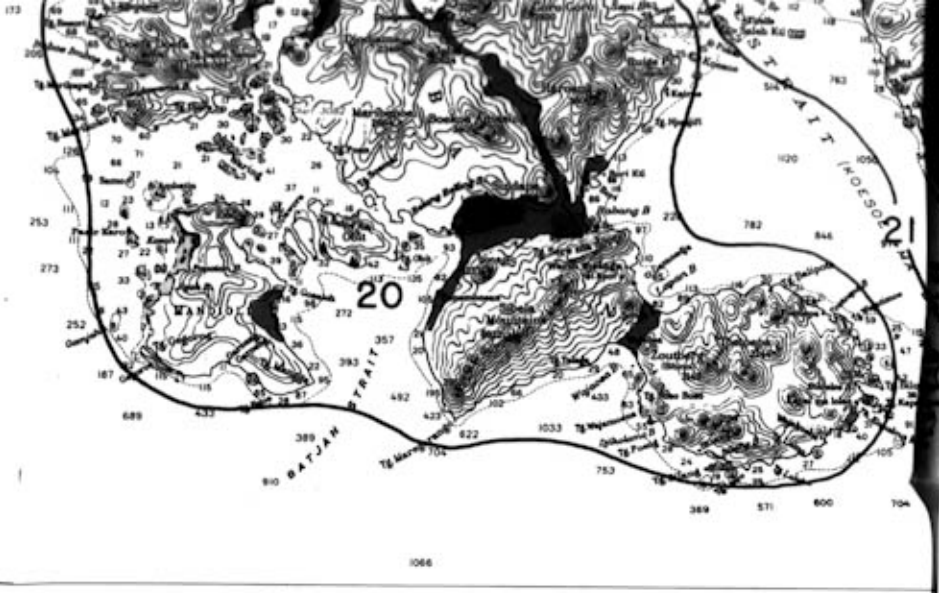
Area 20 Batjan Island Group

TOPOGRAPHY: Most of Batjan has rugged mountainous coast. Locally strips of lowland lie between mountain front and sea. Rolling plains form narrow isthmuses of Laboeha and Wajoea. Extensive swamps and marshes on Laboeha Isthmus and on coastal lowland of northwest Batjan. Tidal swamps in part bordered by beach ridges. A few streams more than 150 feet wide; numerous smaller streams.

Kasiroeta, Mandioli and most other islands of group have rough mountainous coasts interrupted at only a few places by lowlands. Some small, low, and rounded islets.

REMARKS: Except for well-travelled isthmuses on Batjan, interior of islands are difficult of access. Airfield sites can be found on Batjan isthmuses, on Mandioli and Kajoa.

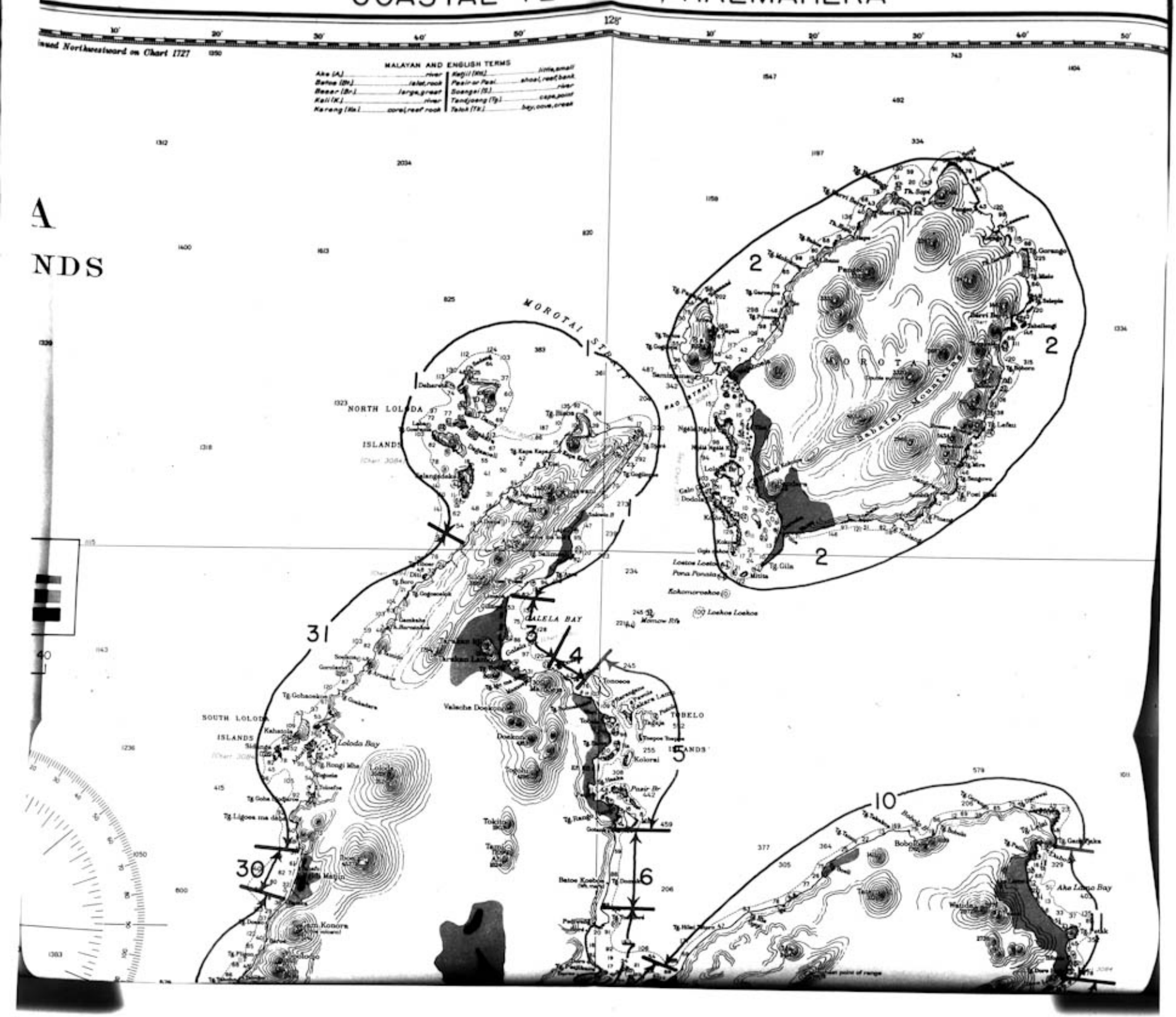
* * * * *

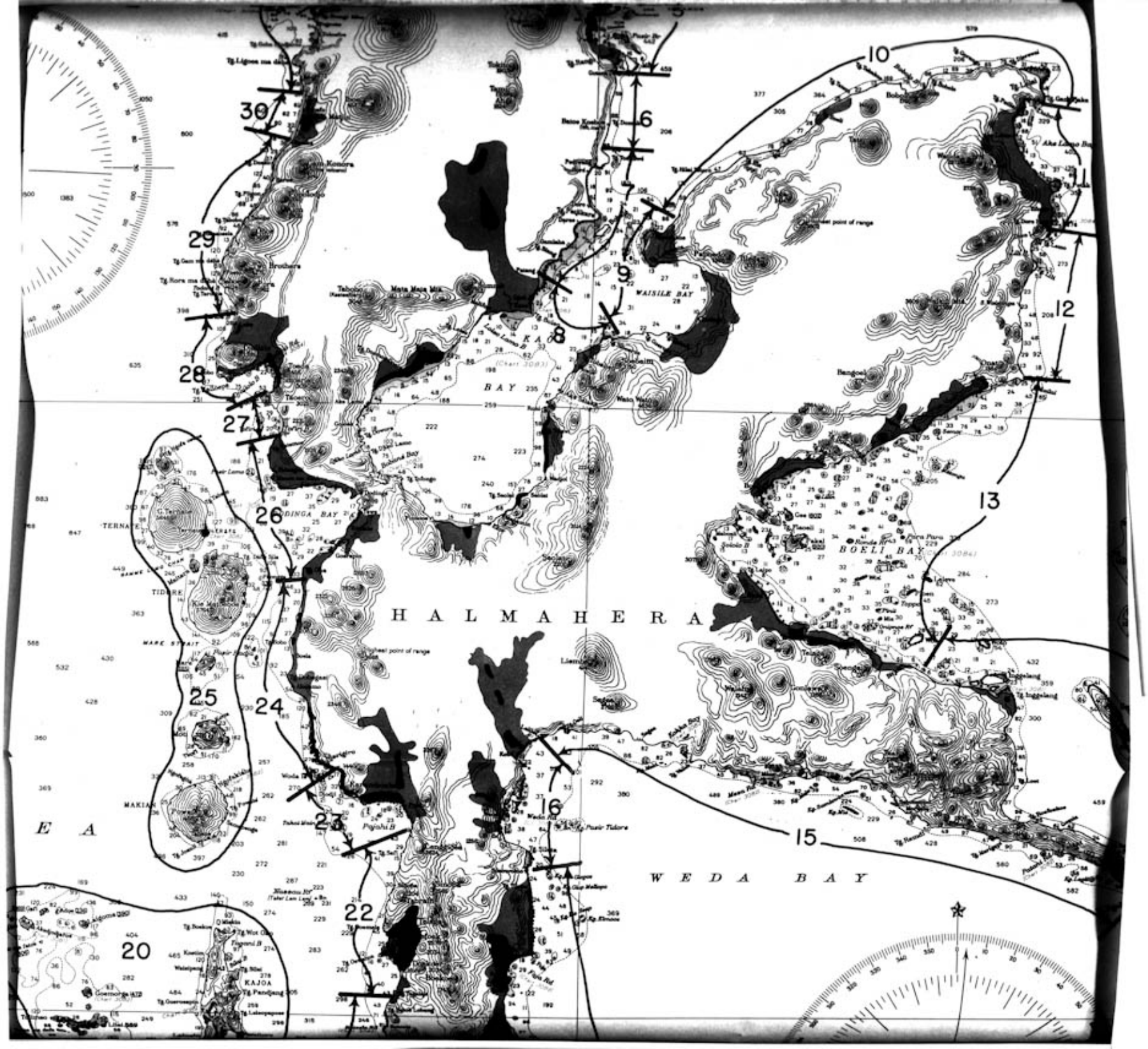


Small corrections from Notices to Mariners: Printed Apr '43 | June '44
from other sources: IX '43 | VI '44

Washington, D.C., published under the authority

COASTAL TERRAIN , HALMAHERA




HALMAHERA
WEDA BAY
BOELI BAY
WAISILE BAY
BAY
TERNATE
TIDORE
MAKIAN
KAJOA
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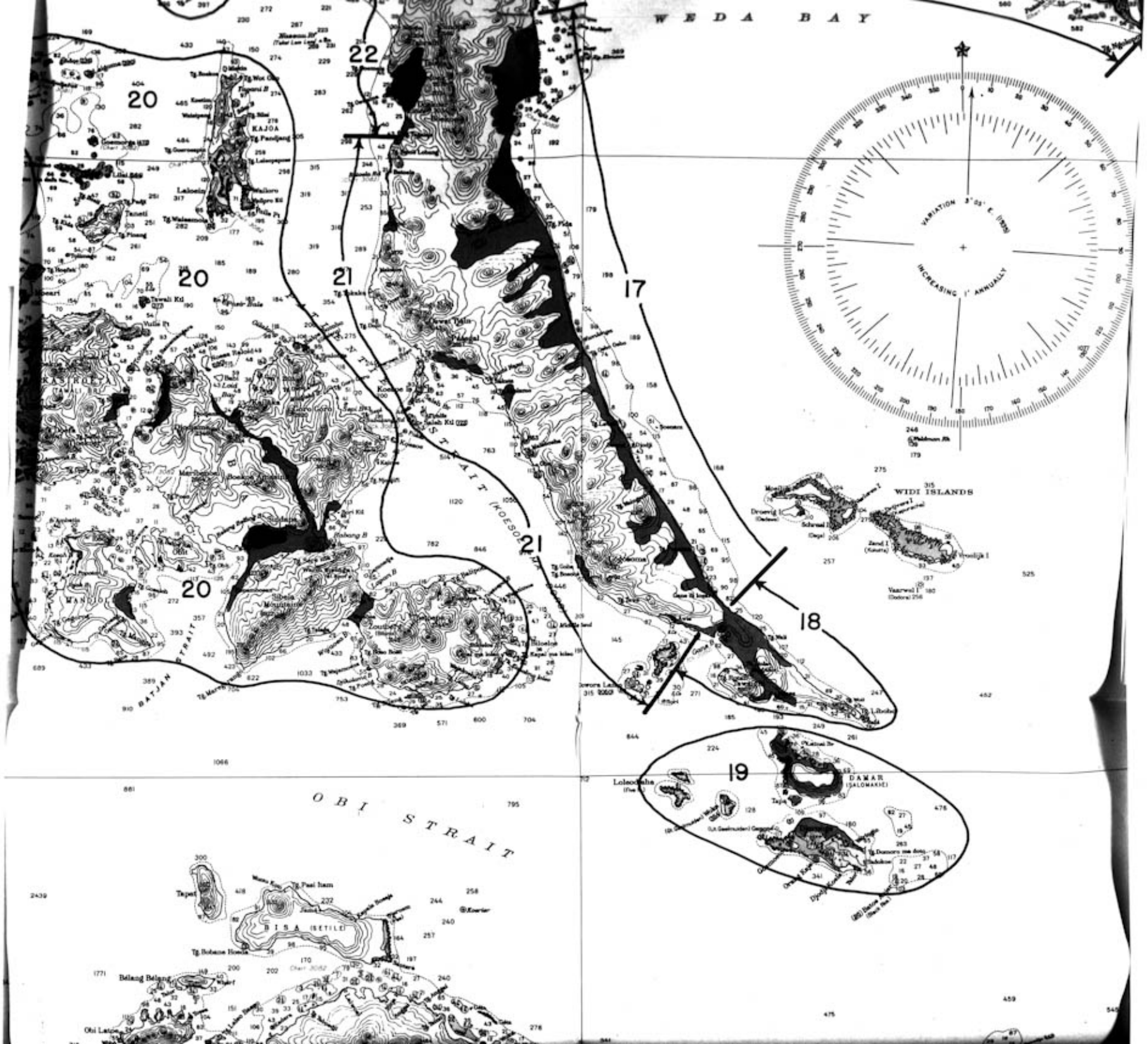
WEDA BAY
22
20
21
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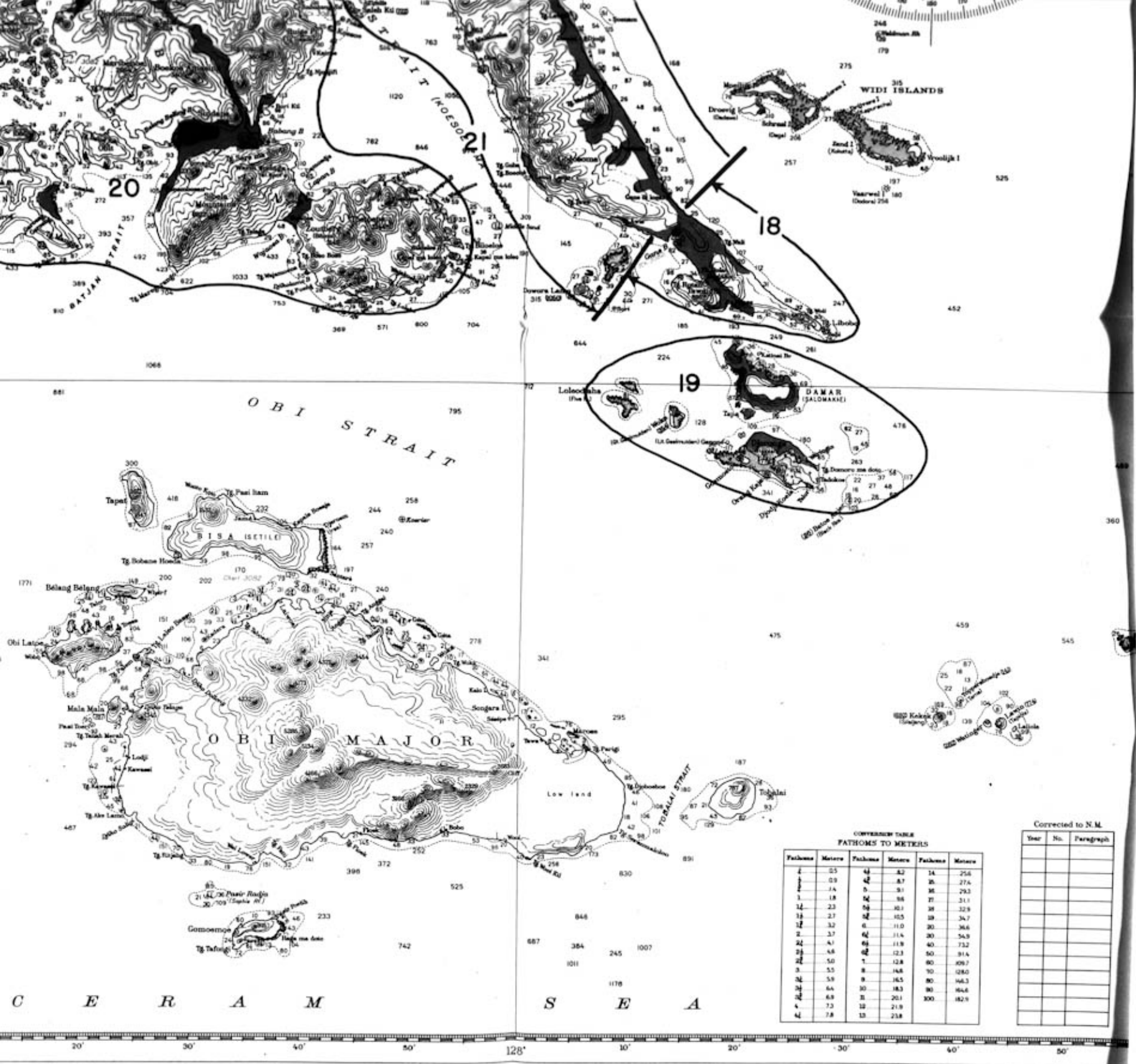
KAJOA
WIDI ISLANDS
DAMAR
(SALOMAKHE)
OBI STRAIT
BISA (SETILE)
VARIATION 3° 05' E. (1939)
INCREASING 7' ANNUALLY



CONVERSION TABLE
FATHOMS TO METERS

Fathoms	Meters	Fathoms	Meters	Fathoms	Meters
¼	0.5	4½	8.2	14	25.6
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1½	2.7	5¾	10.5	19	34.7
1¾	3.2	6	11.0	20	36.6
2	3.7	6¼	11.4	30	54.9
2¼	4.1	6½	11.9	40	73.2
2½	4.6	6¾	12.3	50	91.4
2¾	5.0	7	12.8	60	109.7
3	5.5	8	14.6	70	128.0
3¼	5.9	9	16.5	80	146.3
3½	6.4	10	18.3	90	164.6
3¾	6.9	11	20.1	100	182.9
4	7.3	12	21.9		
4¼	7.8	13	23.8		

Corrected to N.M.

Year	No.	Paragraph

Washington, D.C., published Mar. 1938, at the Hydrographic Office, under the authority of the SECRETARY OF THE NAVY.

HALMAHERA

PLAN NO 3
Janis 155
CONFIDENTIAL

Area 1

Narrow strips and pockets of coastal flats alternate with hilly to mountainous coast and terraced coastal slopes. High, heavily forested mountains in hinterland. Many small streams. Coastline locally cliffed. Beaches generally narrow, but locally broad at low tide.

One larger strip of coastal plain on east side. Surface flat to undulatory. Abrupt rise to mountains on inner side. Sandy beaches. Possible airfield site.

Topography of North Loloda Islands similar to mainland, but relief lower and coastal flats virtually absent.

Narrow fringing coral reefs at scattered localities.

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Area 2 Morotai

TOPOGRAPHY: Diversified coastal topography includes stretches of lowland, terraced slopes, hilly areas, and steep, mountainous slopes. Relief minimum at southwest and west. Numerous streams, many of moderate to large size, and some navigable by small boats Large coastal plain at southwest corner, and smaller one in vicinity of Wajaboela at west. Surface flat to undulatory. Gradual rise on inland side at both places.

Small islands off southwest coast are low, with flat to rolling surfaces. Larger island of Raoe is hilly with low to moderate slopes at shore; slopes steeper at higher elevations.

Fringing coral reefs at places along shores of main island and around some of smaller islands.

GROUND CONDITIONS: Sandy loam to clay soils, grading down into sand, silt, and clay locally gravelly, or lying on coral rock at depths of a few feet to several feet. Soil drainage fair to good, except in local marshy patches. Good footing when dry; moderately muddy when wet.

VEGETATION: Tropical rain forest, with some coconut palms along shore; bamboos along streams; local clearing and second growth forest around settlements.

REMARKS: Possible airfield sites near Wajaboela and on coastal plain at southwest.

• • • • •

Area 3 Galela Plain

TOPOGRAPHY: Broad lowland surrounded by high, rugged mountains. Lakes near center bordered by 2 small, steep-sided volcanic cones; conspicuous landmarks. Flat to undulatory surface at north; low, rolling hills at south. Abrupt rise to bordering mountains at north, more gradual rise at south. Crossed by winding channel of Tiabo River, about 50 yds. wide. Low, rounded beach ridges up to about 10 ft. high along shore north of Galela; low sea cliffs along shore south of Galela.

GROUND CONDITIONS: Sandy loam to clay soil grading down into sand, silt, and clay, locally gravelly, on lowland surface. Fair to good drainage except in large swamps near shore north of Galela. Good footing except during and immediately after rain. Volcanic cinders near ground surface on conical hills, and lava rock at or near surface locally south of Galela. Sandy beaches north of Galela, rocky shore south of Galela.

VEGETATION: Large areas of grassland on inland side. Clearings, cultivated fields, patches of second growth forest, virgin forest, and swamp vegetation in rest of area.

REMARKS: Jap airfield north of Galela. Other possible airfield sites. Narrow valley corridor extends to west coast. Shore road south to Tobelo.

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Area 4

Narrow terrace at foot of steep volcanic cone with sides grooved by numerous ravines. Terrace bordered by low sea cliff. Rocks along shore. Coconut palms and other forest vegetation. Road on inner side of terrace reported recently blocked by lava flow.

• • • • •

Area 5 Tobelo Plain

TOPOGRAPHY: Flat to undulatory lowland strip averaging about 1.5 miles wide. Gradual rise to high mountains on inner side. Crossed by a few small streams.

Several low-lying islands up to more than 2 miles long a few miles offshore. Fringing coral reefs at places along island and mainland shores.

GROUND CONDITIONS: Loam soil, sandy near shore, grading down into sand, silt, and clay, locally gravelly. Good drainage except in local marshy tracts. Good footing except during and immediately after rain. Beaches sandy.

VEGETATION: Coconut palms both on islands and on mainland; partly in plantations. Some grassland at north. Bamboos along streams. Virgin forest and second growth forest in rest of area.

REMARKS: Jap airfield on Miti Island. Other possible airfield sites. Road at north continuous with horse trail at south; follows shore.

• • • • •

Area 6

Broad terrace flats and gentle slopes extending several miles inland; sea cliffs and bluffs 150 to 300 ft. high. Stony ground near shore. Beaches narrow or absent. Terrace edge cut by irregularly spaced, narrow, V-shaped valleys.

• • • • •

Area 7

Undulatory sloping plains and rolling hills leading gradually up from shore to heights overlooking Kaoe Valley. Widely spaced valleys of moderate size cut below general level. One low-lying island about a mile offshore. Narrow sandy beaches. Possible airfield sites.

• • • • •

Area 8 Kaoe Bay

TOPOGRAPHY: Coastal lowlands, diverse in size and shape, alternate with stretches of hilly to mountainous coast and terraced coastal slopes. Lowlands bordered by mountains. Moderate to large streams

feet. Beaches sandy. [illegible] Good footing except during and immediately after

VEGETATION: Coconut palms both on islands and on mainland; partly in plantations. Some grassland at north. Bamboos along streams. Virgin forest and second growth forest in rest of area.

REMARKS: Jap airfield on Miti Island. Other possible airfield sites. Road at north continuous with horse trail at south; follows shore.

• • • • •

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Broad terrace flats and gentle slopes extending several miles inland; sea cliffs and bluffs 150 to 300 ft. high. Stony ground near shore. Beaches narrow or absent. Terrace edge cut by irregularly spaced, narrow, V-shaped valleys.

• • • • •

Area 7

Undulatory sloping plains and rolling hills leading gradually up from shore to heights overlooking Kaoe Valley. Widely spaced valleys of moderate size cut below general level. One low-lying island about a mile offshore. Narrow sandy beaches. Possible airfield sites.

• • • • •

Area 8 Kaoe Bay

TOPOGRAPHY: Coastal lowlands, diverse in size and shape, alternate with stretches of hilly to mountainous coast and terraced coastal slopes. Lowlands bordered by mountains. Moderate to large streams enter bay on all sides.

Principal lowland is at mouth of Kaoe River, one of largest streams of island; continuous with broad interior basin. Bordered by low, rolling hills on east and higher, steeper hills on west. Sand bars at river mouth. River channel about 80 ft. wide. Banks low.

Beaches narrow or absent where shore is steep; locally broad along lowlands. Narrow fringing coral reefs at a few places.

GROUND CONDITIONS: Sandy loam to clay soil, grading down into sand, silt, and clay locally gravelly, on lowlands. Large areas of swampy and marshy ground along and in from lowland shores; elsewhere not too wet; is easily excavated.

Along steeper stretches of coast, soils grade down into bedrock at depth of several feet; well drained; footing good.

Beaches sandy to muddy along lowlands, sandy to rocky elsewhere.

VEGETATION: Coconut palms along shore at many places. Some grassland on Kaoe Plain. Clearings and second growth forest near settlements. Mangroves and other swamp vegetation along and on some lowland areas. Virgin tropical forest elsewhere.

REMARKS: Jap airfield near Kaoe; another airfield reported across bay at Wasile. Kaoe Valley provides access to interior; lower course of Kaoe River navigable by small boats. Isthmus corridor from west end of bay leads to west coast. From south shore of bay a direct overland route extends to head of Weda Bay.

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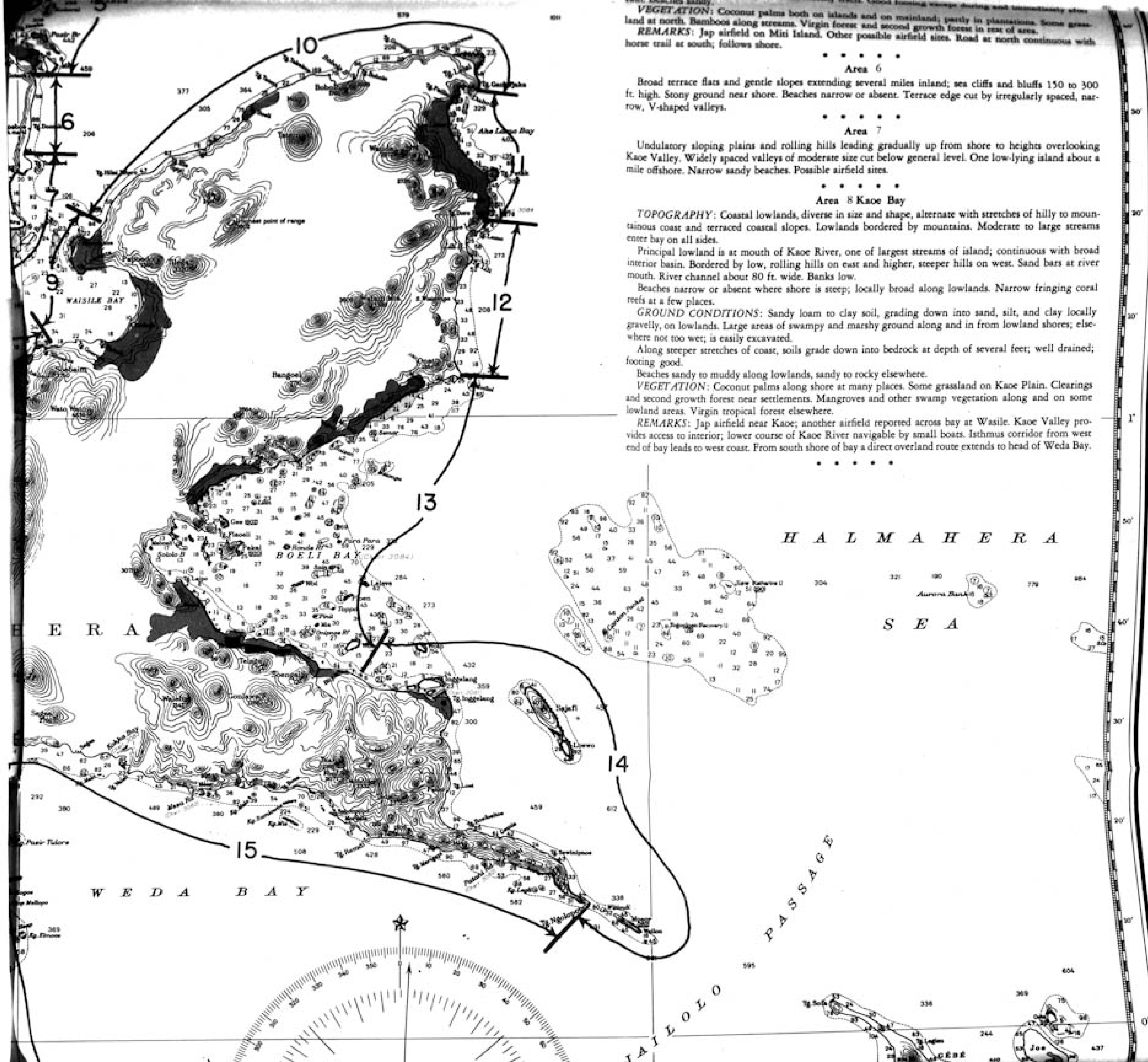

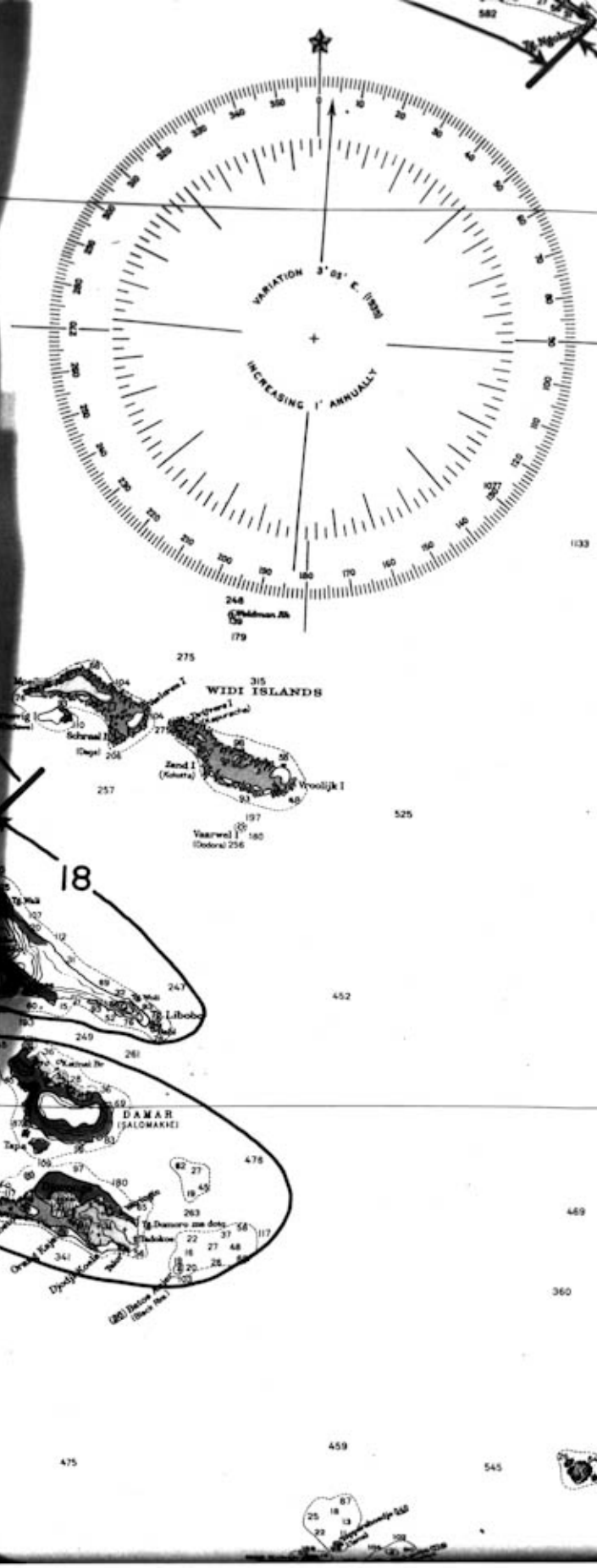

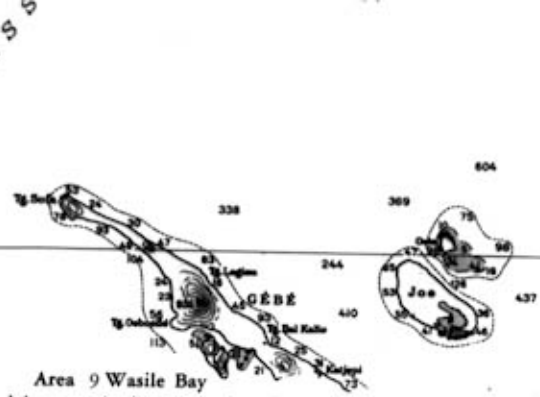

Area 9 Wasile Bay

TOPOGRAPHY: Broad, flat to undulatory lowlands at east and north, separated by stretch of terraced shore. At south, shore terraced to hilly. Several moderate size streams. Abrupt rise to mountains east of main coastal plain, more gradual rise from plain at north. Narrow fringing reef at north.

GROUND CONDITIONS: Loam soil grading down into gravel, sand, silt, and clay, and at north locally underlain by coral rock. Soil fairly well drained, gives good footing, is easily excavated; muddy when wet. Beaches sandy.

VEGETATION: Coconut palms along shore, bamboos along streams, and virgin tropical forest on rest of area except for local clearings and second growth forest tracts near settlements.

REMARKS: Several possible airfield sites. Difficult mountain trail gives access to north shore of Boeli Bay.

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Area 10

Terraced coast rising gradually toward interior mountains. Narrow sandy beaches. Moderate to steep shore slopes, locally rocky. Widely spaced streams of moderate size. Fringing coral reef at northeastern tip. One narrow lowland strip with possible airfield site.

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Area 11

Broad, flat to undulatory lowland. Steep, abrupt rise to high mountains at west; less abrupt rise to mountains at south and to high hills at north. One isolated hill at south shore. Crossed by a few large streams and a few minor streams. Beach ridges locally. Narrow fringing coral reefs at a few places.

Several possible airfield sites. No easy access to other parts of peninsula.

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Area 12

Hilly coast with moderate to steep slopes rising from sea or narrow discontinuous beaches. A few streams of moderate size and many small streams.

• • • • •

Area 13 Boeli Bay

TOPOGRAPHY: Coastal lowlands fronted by sandy beach; separated by rough steep-sided ridges and prominent rocky headlands. High rugged mountains rise from inland margins. Most extensive lowland is on south shore. Narrow east half is flat and swampy except for beach ridges and local coastal terraces. West half includes broad valley flats of lower Nau River; flat or gently undulating and fairly well-drained. Lowlands on northwest and north sides of Bay are 10 to 11 miles long, 1 to 3 miles wide. Plains slope gently seaward from mountain front; fairly well-drained. Many small reefs in Boeli Bay, some dry at low tide. Steep rugged islands off the rocky headland near Boeli Serani.

REMARKS: Short stretches of trail along parts of coast. Mountainous interior inaccessible except by a few difficult foot paths.

• • • • •

Area 14 Southeast arm from Bitjoli village to Cape Ngolopopo

TOPOGRAPHY: Narrow discontinuous lowlands and low rocky terraces interrupted locally by rugged headlands. Large area of marsh on lowland of Tg. Inggelang. Hinterland of high terraces and steep-sided mountains. Coast bordered at several points by reefs. Several coral islands off-shore. Moeor and Sajafi are hilly in part; locally more than 280 feet high. Others low, rounded, less than 100 feet in altitude.

REMARKS: Mountainous interior; inaccessible. A few short coastwise trails. Short road on Inggelang Island.

• • • • •

Area 15 South Coast of Southeast Peninsula

TOPOGRAPHY: Rugged mountainous coast. In a few places, narrow strips of lowland lie between the steep mountain front and the sea. Small swamps common at river mouths. A few streams are more than 150 feet wide in lower reaches; numerous smaller streams.

REMARKS: Mountainous interior inaccessible except for a few difficult trails. A few short coast-wise trails.

• • • • •

Area 16 Lelilef to Sosowomo

TOPOGRAPHY: Flat or gently undulating plain of Kobe River and its tributaries extends 8 to 10 miles inland from Weda Bay. Width 4 to 6 miles. Valley has low marginal hills and terraces bordered by high mountains. River plain locally swampy. Largest swamp is at mouth of Kobe river, which is more than 400 feet wide in its lower reaches. Low beach ridges along the shore.

Along coast south of Kobe plain, narrow irregular lowlands alternate with low hills and coral limestone terraces. Except broad valley of middle and upper Fidi River, hinterland is rough and mountainous. Reefs along parts of coast. A few small coral islets and submerged reefs off-shore from mouth of Fidi.

REMARKS: Some short coastal trails. Trails leading north through Kobe valley follow most direct overland route to western side of Kobe Bay. Airfield sites can be found in better drained areas on east side of lower Kobe Valley.

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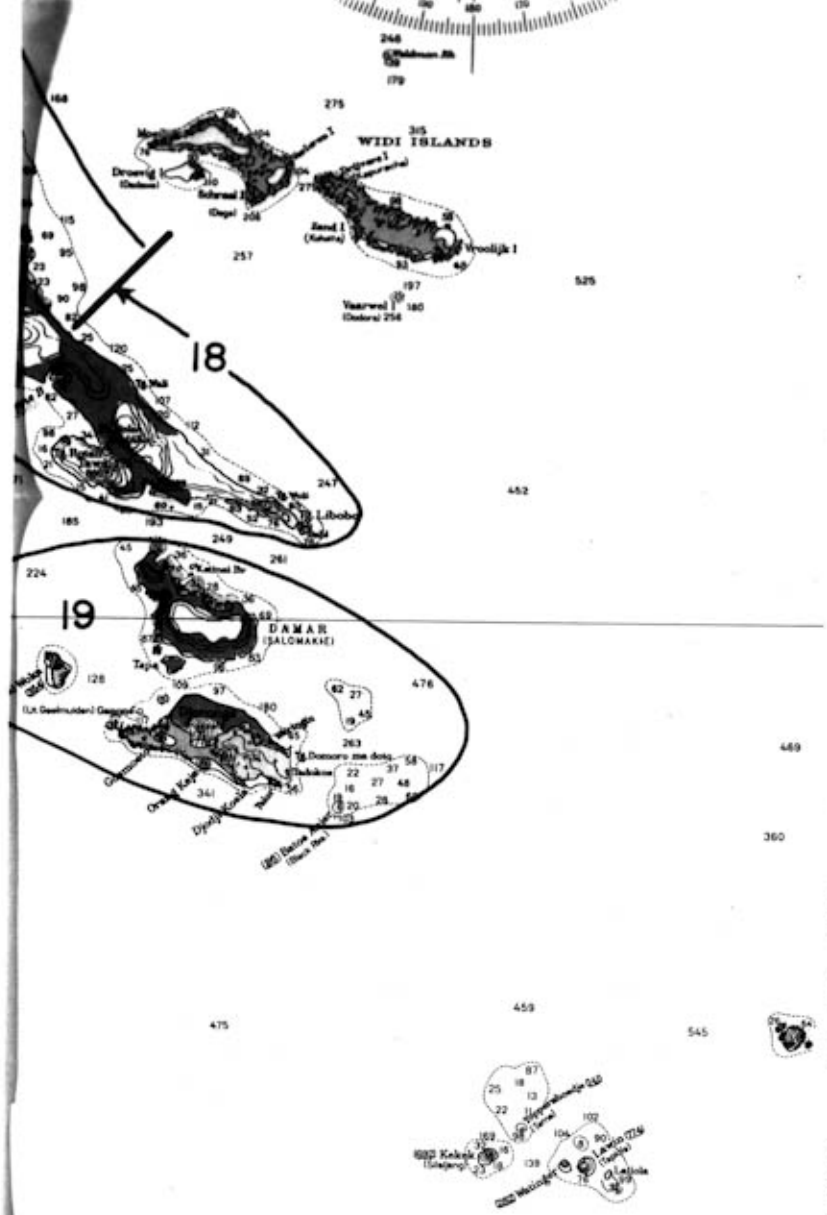
Area 17 East coast of southern peninsula

TOPOGRAPHY: Flat or gently rolling coastal plain of irregular width extends without interruption



shore slopes, locally rocky. Widely spaced streams of moderate size. Fringing coral reef at northeastern tip. One narrow lowland strip with possible airfield site.

• • • • •

Area 11

Broad, flat to undulatory lowland. Steep, abrupt rise to high mountains at west; less abrupt rise to mountains at south and to high hills at north. One isolated hill at south shore. Crossed by a few large streams and a few minor streams. Beach ridges locally. Narrow fringing coral reefs at a few places.

Several possible airfield sites. No easy access to other parts of peninsula.

• • • • •

Area 12

Hilly coast with moderate to steep slopes rising from sea or narrow discontinuous beaches. A few streams of moderate size and many small streams.

• • • • •

Area 13 Boeli Bay

TOPOGRAPHY: Coastal lowlands fronted by sandy beach; separated by rough steep-sided ridges and prominent rocky headlands. High rugged mountains rise from inland margins. Most extensive lowland is on south shore. Narrow east half is flat and swampy except for beach ridges and local coastal terraces. West half includes broad valley flats of lower Nau River; flat or gently undulating and fairly well-drained. Lowlands on northwest and north sides of Bay are 10 to 11 miles long, 1 to 3 miles wide. Plains slope gently seaward from mountain front; fairly well-drained. Many small reefs in Boeli Bay, some dry at low tide. Steep rugged islands off the rocky headland near Boeli Serani.

REMARKS: Short stretches of trail along parts of coast. Mountainous interior inaccessible except by a few difficult foot paths.

• • • • •

Area 14 Southeast arm from Bitjoli village to Cape Ngolopopo

TOPOGRAPHY: Narrow discontinuous lowlands and low rocky terraces interrupted locally by rugged headlands. Large area of marsh on lowland of Tg. Inggelang. Hinterland of high terraces and steep-sided mountains. Coast bordered at several points by reefs. Several coral islands off-shore. Moeor and Sajafi are hilly in part; locally more than 280 feet high. Others low, rounded, less than 100 feet in altitude.

REMARKS: Mountainous interior; inaccessible. A few short coastwise trails. Short road on Inggelang Island.

• • • • •

Area 15 South Coast of Southeast Peninsula

TOPOGRAPHY: Rugged mountainous coast. In a few places, narrow strips of lowland lie between the steep mountain front and the sea. Small swamps common at river mouths. A few streams are more than 150 feet wide in lower reaches; numerous smaller streams.

REMARKS: Mountainous interior inaccessible except for a few difficult trails. A few short coast-wise trails.

• • • • •

Area 16 Lelilef to Sosowomo

TOPOGRAPHY: Flat or gently undulating plain of Kobe River and its tributaries extends 8 to 10 miles inland from Weda Bay. Width 4 to 6 miles. Valley has low marginal hills and terraces bordered by high mountains. River plain locally swampy. Largest swamp is at mouth of Kobe river, which is more than 400 feet wide in its lower reaches. Low beach ridges along the shore.

Along coast south of Kobe plain, narrow irregular lowlands alternate with low hills and coral limestone terraces. Except broad valley of middle and upper Fidi River, hinterland is rough and mountainous. Reefs along parts of coast. A few small coral islets and submerged reefs off-shore from mouth of Fidi.

REMARKS: Some short coastal trails. Trails leading north through Kobe valley follow most direct overland route to western side of Kobe Bay. Airfield sites can be found in better drained areas on east side of lower Kobe Valley.

• • • • •

Area 17 East coast of southern peninsula

TOPOGRAPHY: Flat or gently rolling coastal plain of irregular width extends without interruption from the village of Sosowomo to the southern tip; merges westward with broad valley flats lying between long-finger-like ridges. Plain interrupted locally by isolated hills 300 to 800 feet high. Coast generally low and sandy; locally low beach ridges border the plain. Many streams more than 100 feet wide in their lower courses; some more than 200 feet. Only large areas of marsh and swamp lie between Foja and Boli rivers in north part of the plain.

REMARKS: Good coastwise foot trail. No easy routes to west coast, several poor trails cross mountains. Airfield sites can be found at many places on the plain.

• • • • •

Area 18 Tip of southern peninsula

TOPOGRAPHY: Sandy lowlands and raised coral reefs border irregular hills, ridges, and terraces 150 to 600 feet in altitude. Some low marshy areas around Gane Bay. Forest cover somewhat thinner with trees smaller and farther apart than on other lowlands; underbrush thicker.

REMARKS: Topography locally suitable for airfield sites.

• • • • •

Area 19 Damar and Djoronga Islands

TOPOGRAPHY: Broad flat coastal plains with small groups of rounded hills inland. Coast generally bordered by broad coral reefs. Mangrove swamps fairly common. Smaller islands of the group are mostly flat coral islets; Woka is an atoll.

REMARKS: No trails or roads. Forest and swamp are serious barriers to movement inland.

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CONVERSION TABLE
FATHOMS TO METERS

Fathoms	Meters	Fathoms	Meters	Fathoms	Meters
1	0.5	4¼	8.2	14	25.6
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Corrected to N.M.

Year	No.	Paragraph

20' 30' 40' 50' 129° 10' 20' 30' 40' 2°

CONFIDENTIAL

1st EDITION, Mar., 1938

No. 3080

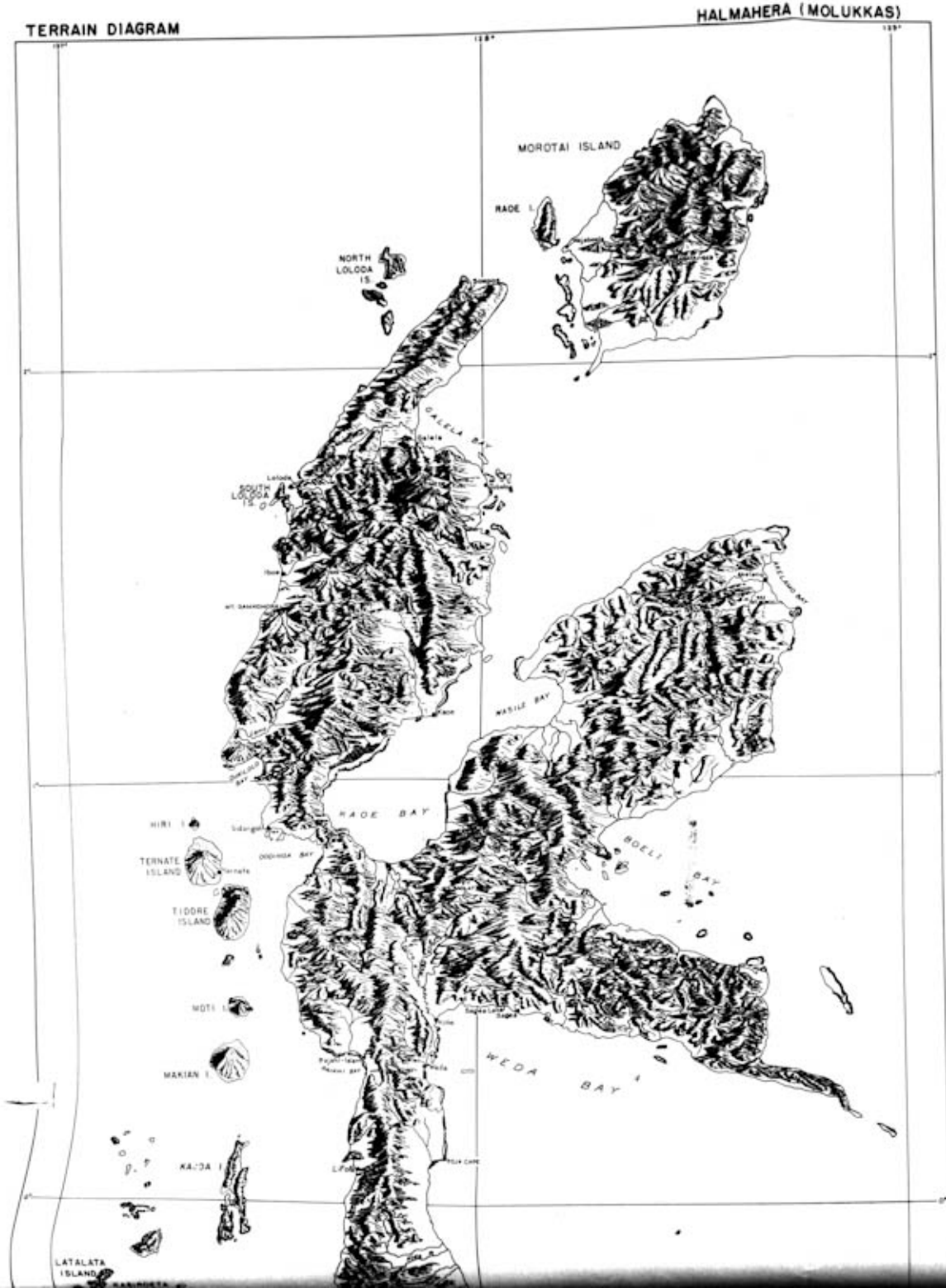
This oversized item has been filmed in sections

PLAN 4 JANIS No. 155 [redacted]

HALMAHERA—Perspective views and relief diagram

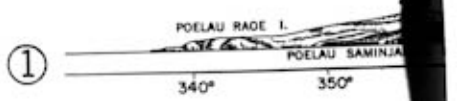
TERRAIN DIAGRAM

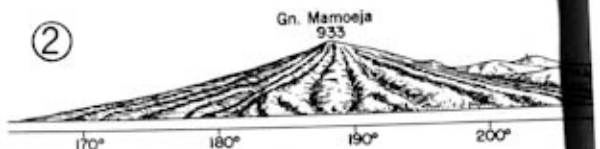
HALMAHERA (MOLUKKAS)

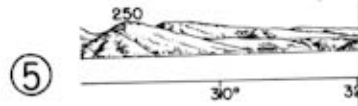


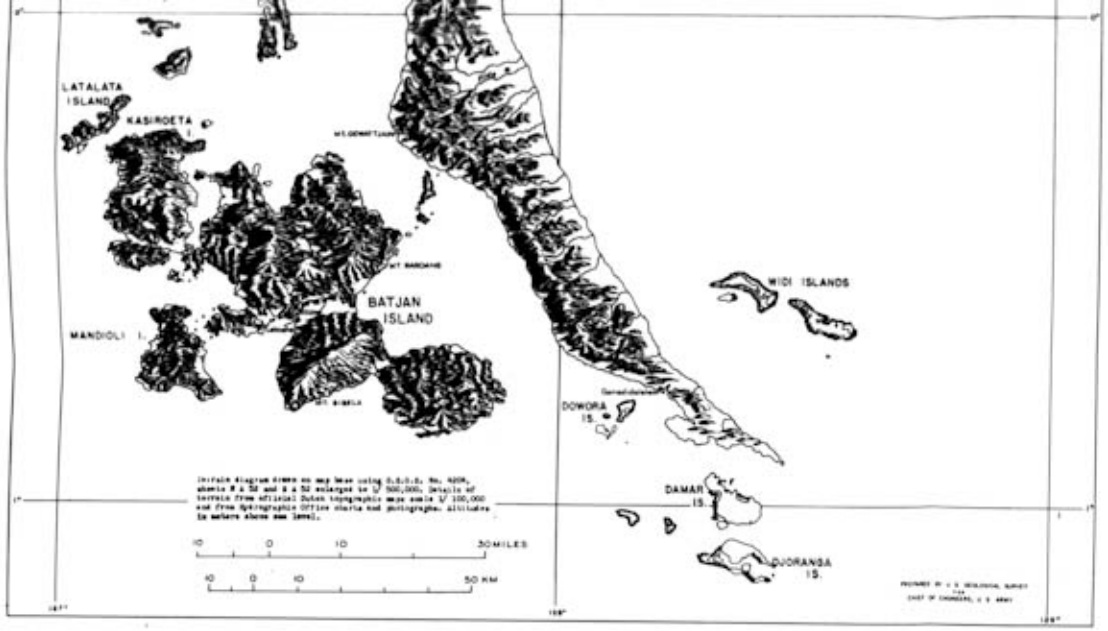
VEGETATION

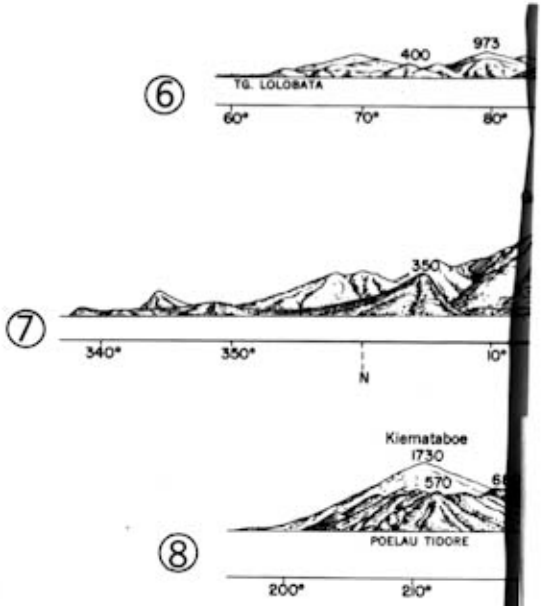
Dense tropical rain forest or swamp forest covers most of the islands. Around settlements and on the larger plains are clearings, gardens, and thick brushy second growth. The virgin rain forest is a mixed stand of hardwood and softwood trees intergrown with a tangle of vines and other plants. Tree trunks are tall and straight, broad at base with buttressed roots; crowns form a continuous overhead canopy. Undergrowth is most dense along streams, in coastal lowlands, and near forest borders. Along streams dense bamboo tickets are common. On higher mountain ridges and drier terrace land along the coast, the forest thins, with trees becoming smaller and farther apart but the underbrush is more dense. Grass (alang-alang) plains are rare but may occur on coastal terraces. Thick stands of Sago palm and cane-like vegetation occur in swamps above tide water level. Near the coast in brackish water grown nipa palms with thick fronds, no trunks, and sharp spikes hidden in the muck. Many tidal swamps have mangrove forests with tangles of prop roots. Coconut palms with little undergrowth border the sandier strips of shore.





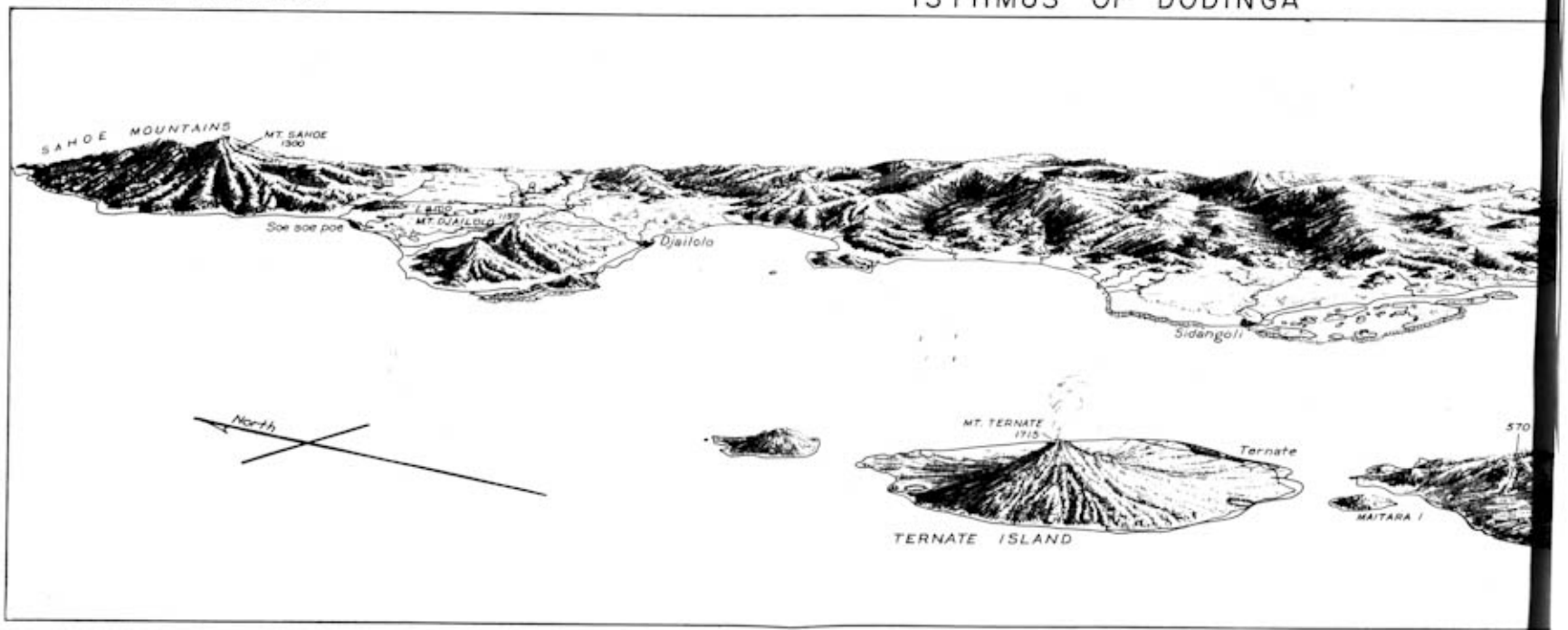






TERRAIN DIAGRAM

ISTHMUS OF DODINGA



Orthographic projection made mechanically from A.M.S. Netherland Indies maps 1:100,000 and from A.M.S. T661 maps 1:20,000 reduced to 1:100,000 with additional data sketched from photographs. Altitudes in meters above sea level. Vertical scale of plan 12 times Vertical scale of

Scale

VEGETATION

Dense tropical rain forest or swamp forest covers most of the islands. Around settlements and on the larger plains are clearings, gardens, and thick brushy second growth. The virgin rain forest is a mixed stand of hardwood and softwood trees intergrown with a tangle of vines and other plants. Tree trunks are tall and straight, broad at base with buttressed roots; crowns form a continuous overhead canopy. Undergrowth is most dense along streams, in coastal lowlands, and near forest borders. Along streams dense bamboo tickets are common. On higher mountain ridges and drier terrace land along the coast, the forest thins, with trees becoming smaller and farther apart but the underbrush is more dense. Grass (alang-alang) plains are rare but may occur on coastal terraces. Thick stands of Sago palm and cane-like vegetation occur in swamps above tide water level. Near the coast in brackish water grown nipa palms with thick fronds, no trunks, and sharp spikes hidden in the muck. Many tidal swamps have mangrove forests with tangles of prop roots. Coconut palms with little undergrowth border the sandier strips of shore.

GROUND CONDITIONS

Soil is generally deep and clayey throughout the mountain areas. On volcanic peaks and on some of the steeper ridges, however, the ground is rocky, and cliffs and ledges are numerous. Most of the underlying rock is conglomerate, hard lava rock, or limestone. In the lowland areas, the soil is clayey or sandy, in places gravelly. On terraces along the coast, it is fairly thin and clayey with hard coral limestone locally at or near the surface. Most soils are well drained and provide good footing when dry but all become muddy and slippery during and after rains. There are large tracts of swamp and marshland on many areas of coastal lowland especially along the larger rivers. In dry seasons the marshland may become fairly firm and passable but travel is slow. Beaches commonly have mantle of rock fragments or coarse coral sand. Small low islets off Halmahera are coral rock overlain by sand or patches of clay soil.

GENERAL DESCRIPTION

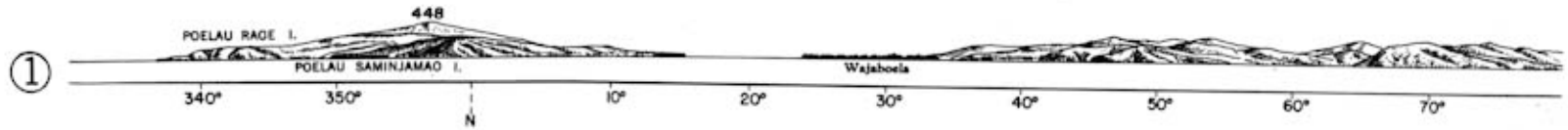
TOPOGRAPHY

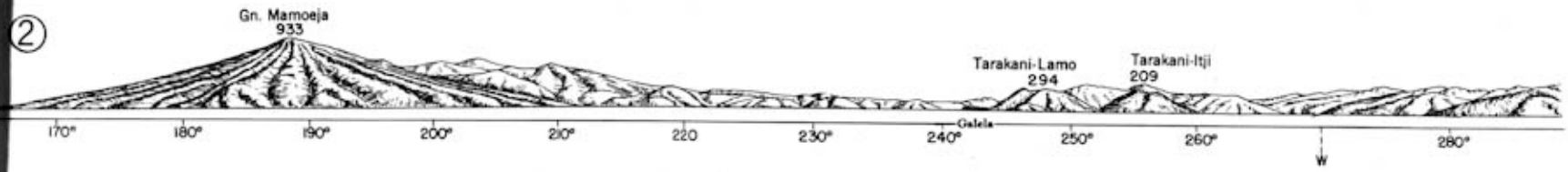
The 3 types of terrain characteristic of the coastal regions of Halmahera are described below. The principal coastal lowlands and larger swampy areas are shown on the map; mountains and higher terraces have not been differentiated.

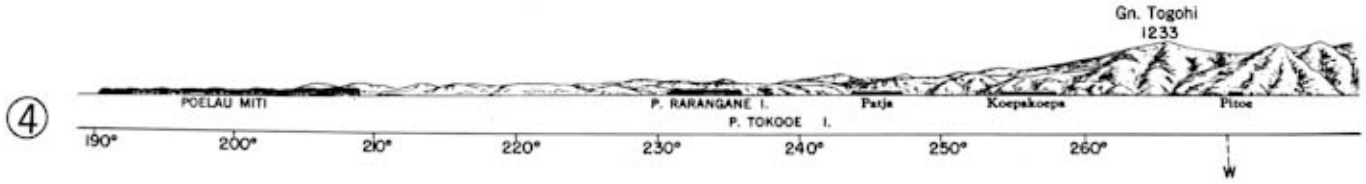
COASTAL LOWLANDS: Flat to undulating alluvial plains crossed by a few fairly large rivers; numerous and extensive along the east coast and on Morotai, less so along the west coast and on the Batjan Islands.

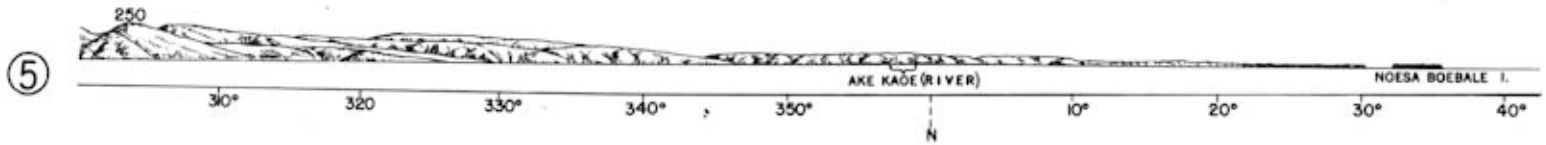
LOW COASTAL TERRACES AND HILLS: Low rough-surfaced or rolling terraces and broad rounded hills a few hundred feet high; occupy large areas only on the east side of Halmahera and on certain islands in the Batjan group.

MOUNTAINS: On Morotai, Batjan, and most of Halmahera, mountains, which along the coast end in high cliffs or steep rugged slopes broken by numerous sharp ridges and steep narrow valleys. Makian, Moti, Tidore, and Ternate Islands off the west coast of Halmahera are part of a chain of volcanoes that extends diagonally across the northern peninsula of Halmahera. The mountain ranges sharply delimit most of the lowland areas and, with few exceptions, are unbroken by natural corridors which would permit easy access into the interior of the island.









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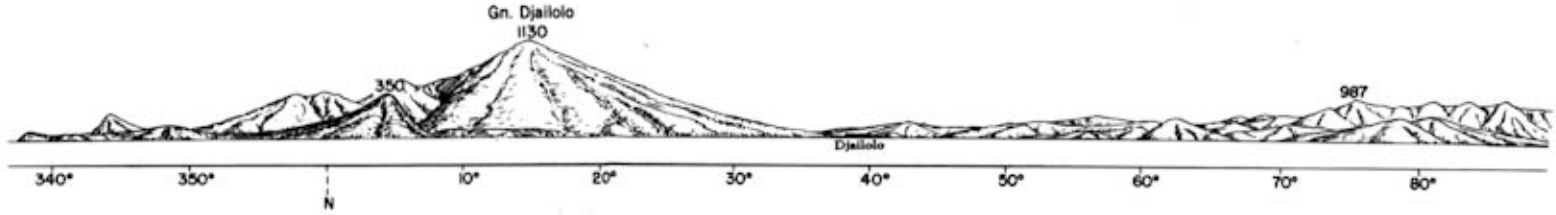
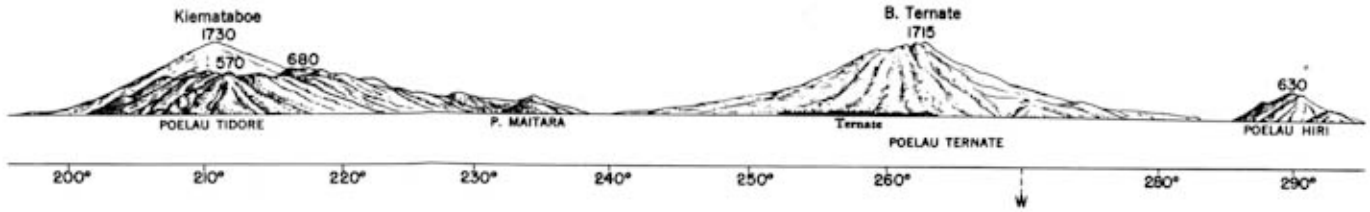


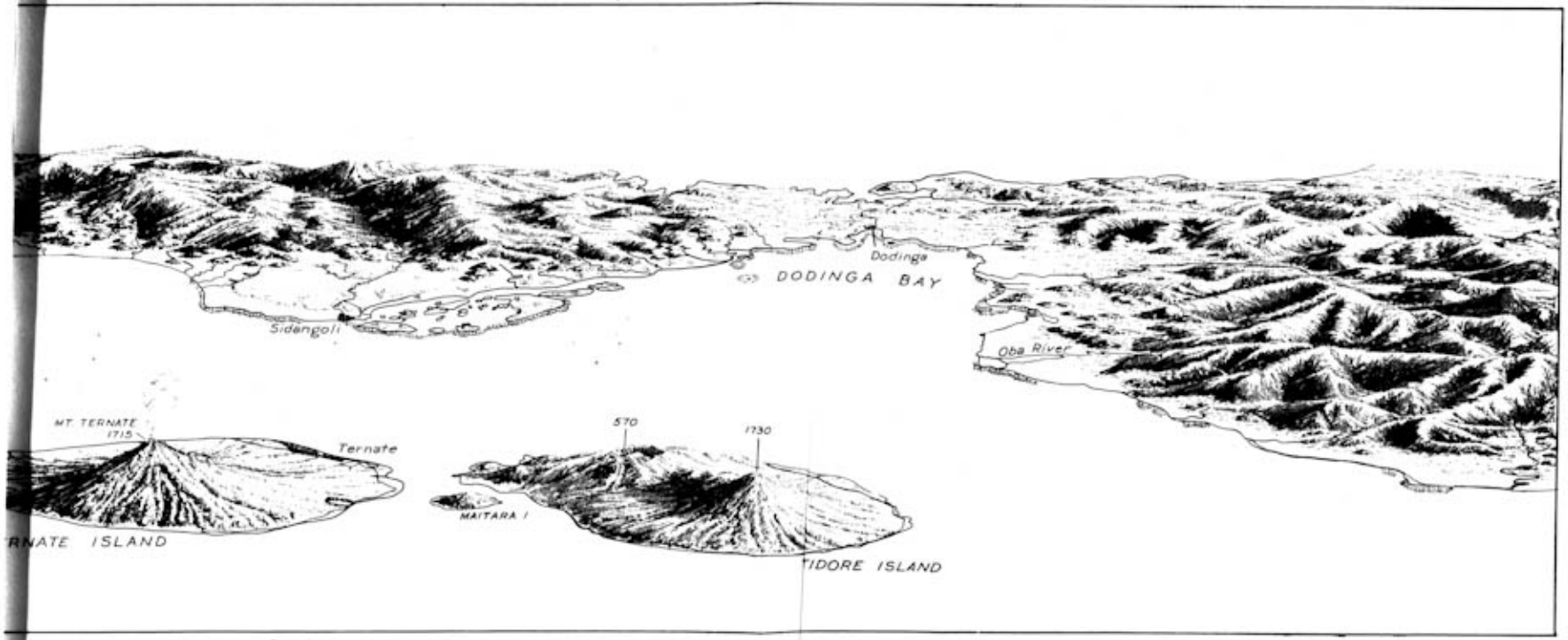
⑦



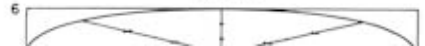
⑧

STHMUS OF DODINGA

HALMAHERA (MOLUKKAS)



Scale



PREPARED BY U. S. GEOLOGICAL SURVEY
FOR
CHIEF OF ENGINEERS, U. S. ARMY

This oversized item has been filmed in sections

PLAN 5 JANIS No. 155 [redacted]AL

NORTHERN HALMAHERA—Hydrography, landing areas, coral, and mangrove

MOLUKKEN ISLANDS, 1:300,000
HALMAHERA

For use by War and Navy Department Agencies only
Not for sale or distribution

VOORLOOPIGE SCHETSKAART
VAN HET EILAND
HALMAHERA
EN OMLIGGENDE EILANDEN
Schaal 1:300 000.

LEGENDA.

R. Standplaats van den Resident.
C. " " een Controleur.
Gz. " " " Gezaghebber.
" " " Districtshoofd.
Gewone plaats.
Gemiddeldeplaats.
Havens opengesteld v. d. algemeenen handel.
Afdeelingsgrens.
Onderafdeelingsgrens.
Districtsgrens.
Karrewegen.
Paardepaden.
Voetpaden.
Berghoogten in Meters.

VERKORTINGEN.

A. Ake. B. Baai. G. Goenoeng.
S. Soengai. Str. Straat. B. Boekoe.
T. Telaga. P. Poelo. Tg. Tandjoeng.
EIL^n Eilanden.

ADMINISTRATIEVE INDEELING.

I. Afdeeling Ternate
II. " Batjan
III. Afdeeling Halmahera

A. Onderafd. Djailolo
- Distr. Djailolo met a. Sidangoli / b. Dodinga
- " Sahoe
- " Iboe
- " Loloda
- " Oba

B. Onderafd. Tobelo
- Distr. Tobelo.
- " Morotai
- " Galela
- " Kaoe
- " Waisile

C. Onderafd Weda
- Distr. Weda
- " Maba
- " Gaäne

D. Onderafd Tidore.

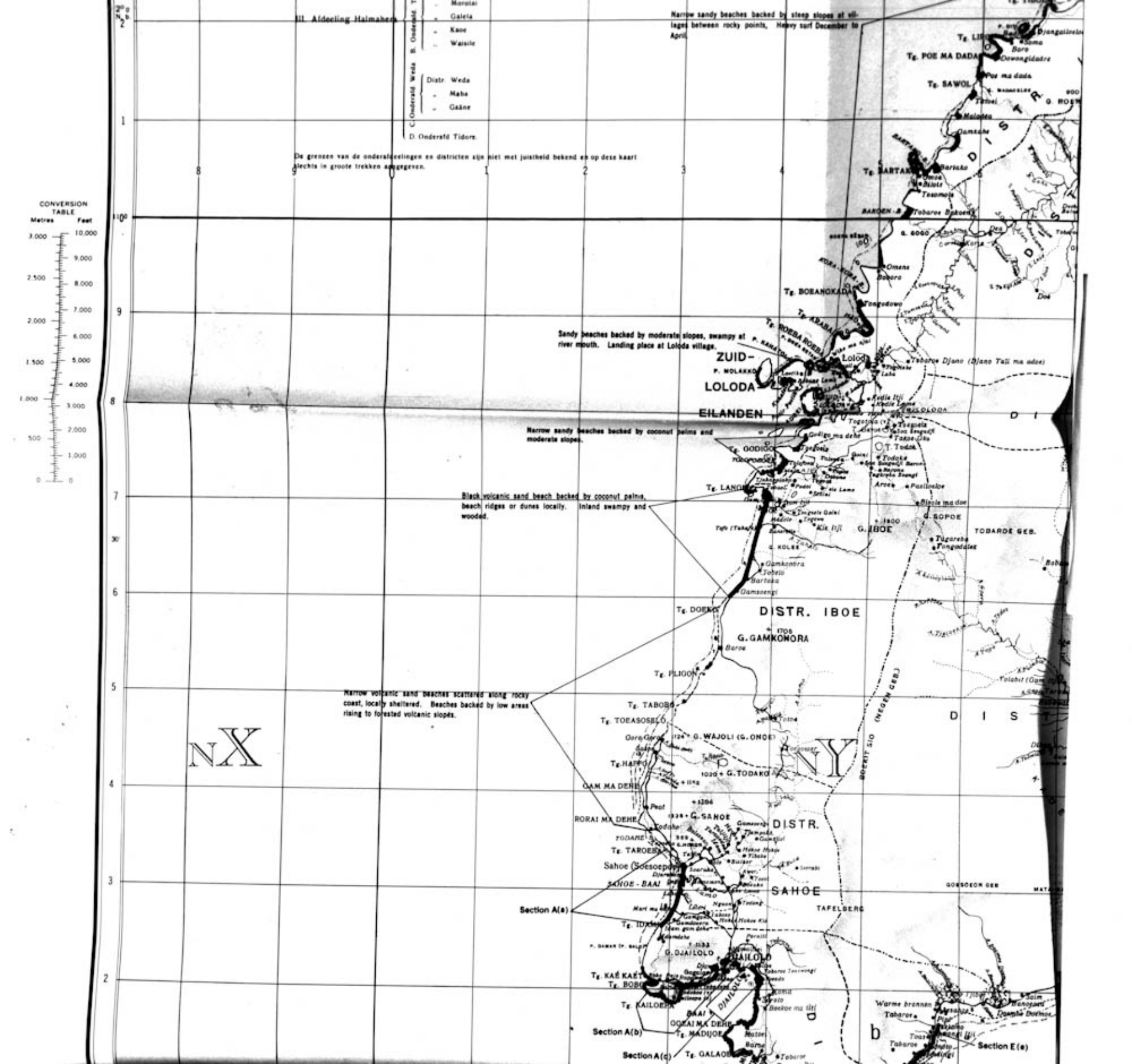
De grenzen van de onderafdeelingen en districten zijn niet met juistheid bekend en op deze kaart slechts in groote trekken aangegeven.

Numerous sandy beaches backed by forested hill slopes.

Narrow sandy beaches backed by steep slopes at villages between rocky points. Heavy surf December to April.

NOORD-LOLO

Tg. TABOEA
Tg. GOERAMA
Tg. GORONA MA DO
Tg. ASUMBO
Tg. TIBOE
Tg. LIPO
Tg. POE MA DADA
Tg. SAWOL
G. ROSENGKO
Tg. BARTAK
Djangallolon
Soma
Baro
Dowongidadre
Poe ma dada
Tabarea
Malantes
Gamsahi
Barioko
Tasomoto
Tobaroa
Batoeng
Dowongi
Rotong (Tobo)
Djiko
Dowongili
Tatoei



De grenzen van de onderafdeelingen en districten zijn niet met juistheid bekend en op deze kaart slechts in groote trekken aangegeven.

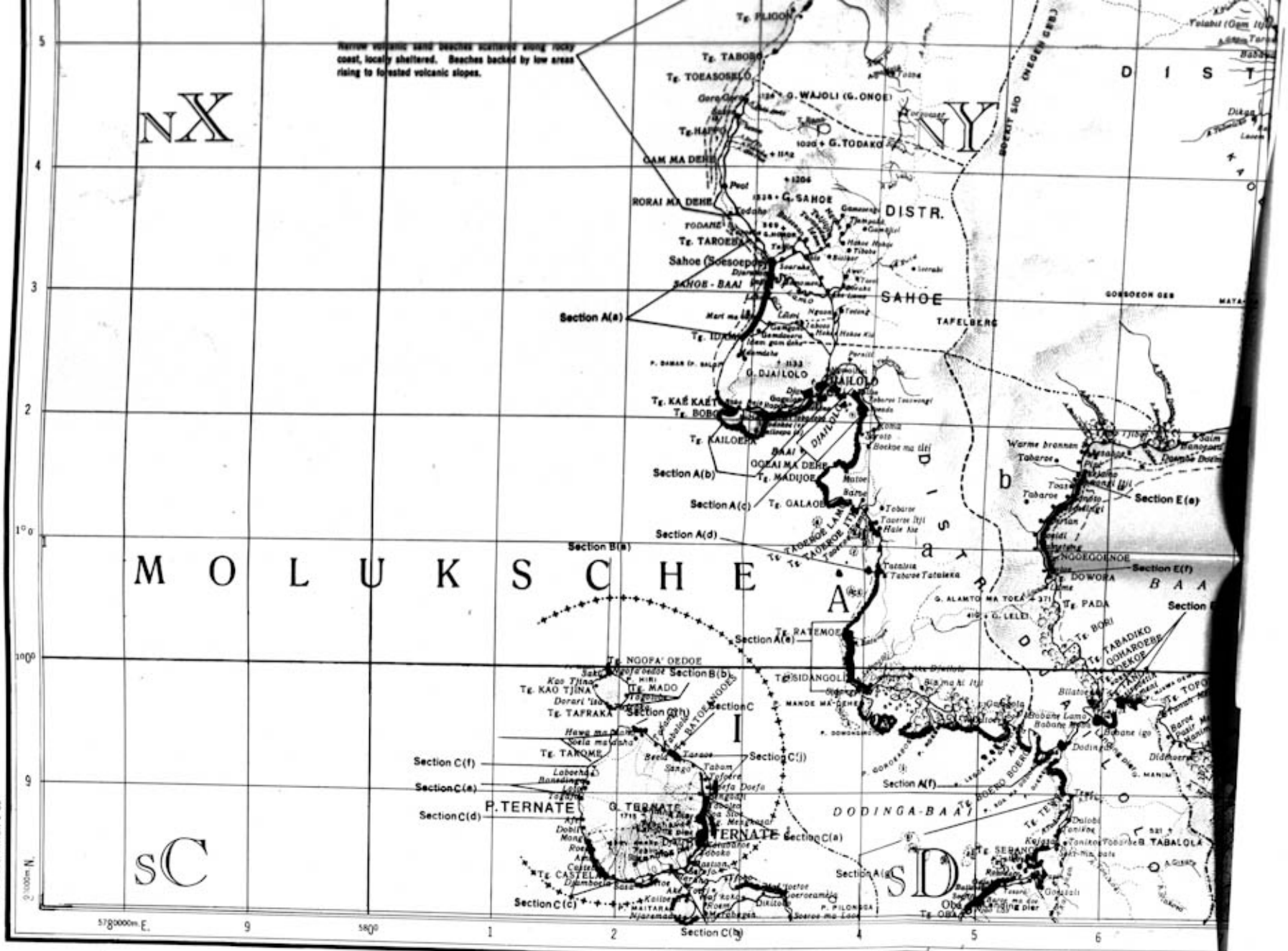
Narrow sandy beaches backed by steep slopes at villages between rocky points. Heavy surf December to April.

Sandy beaches backed by moderate slopes, swampy at river mouth. Landing place at Loloda village.

Narrow sandy beaches backed by coconut palms and moderate slopes.

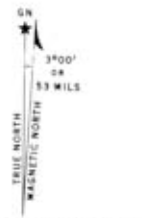
Black volcanic sand beach backed by coconut palms, beach ridges or dunes locally. Inland swampy and wooded.

Narrow volcanic sand beaches scattered along rocky coast, locally sheltered. Beaches backed by low areas rising to forested volcanic slopes.

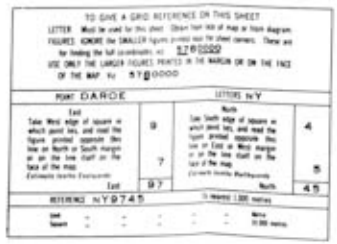


AMS T461.
First Edition 1943.

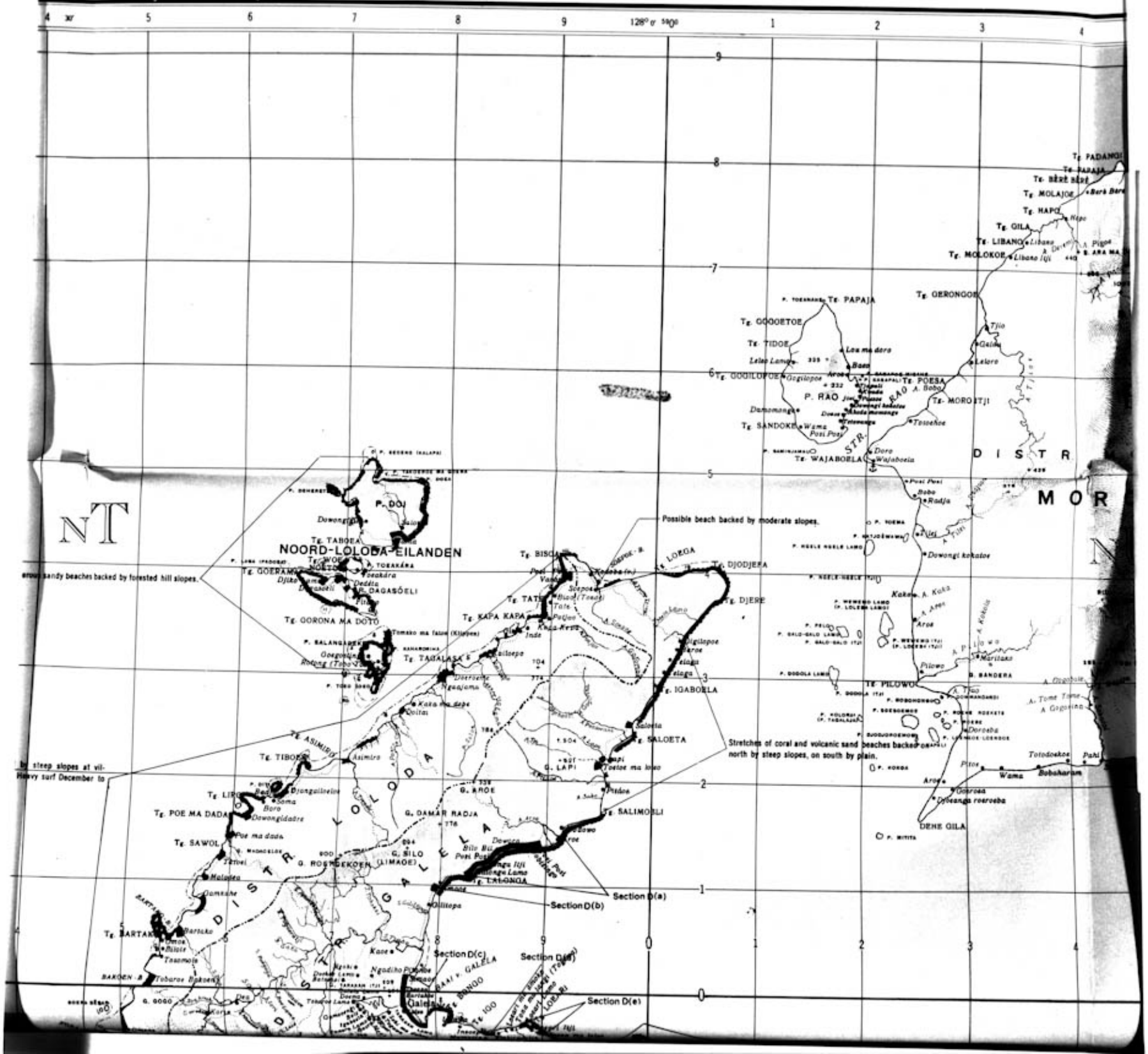
Prepared under the direction of the Chief of Engineers, U. S. Army, 1943. Copied from a Dutch Map dated 1918.
HYDROGRAPHY FROM NETHERLANDS HYDRO. CHARTS 386, 387 & 391



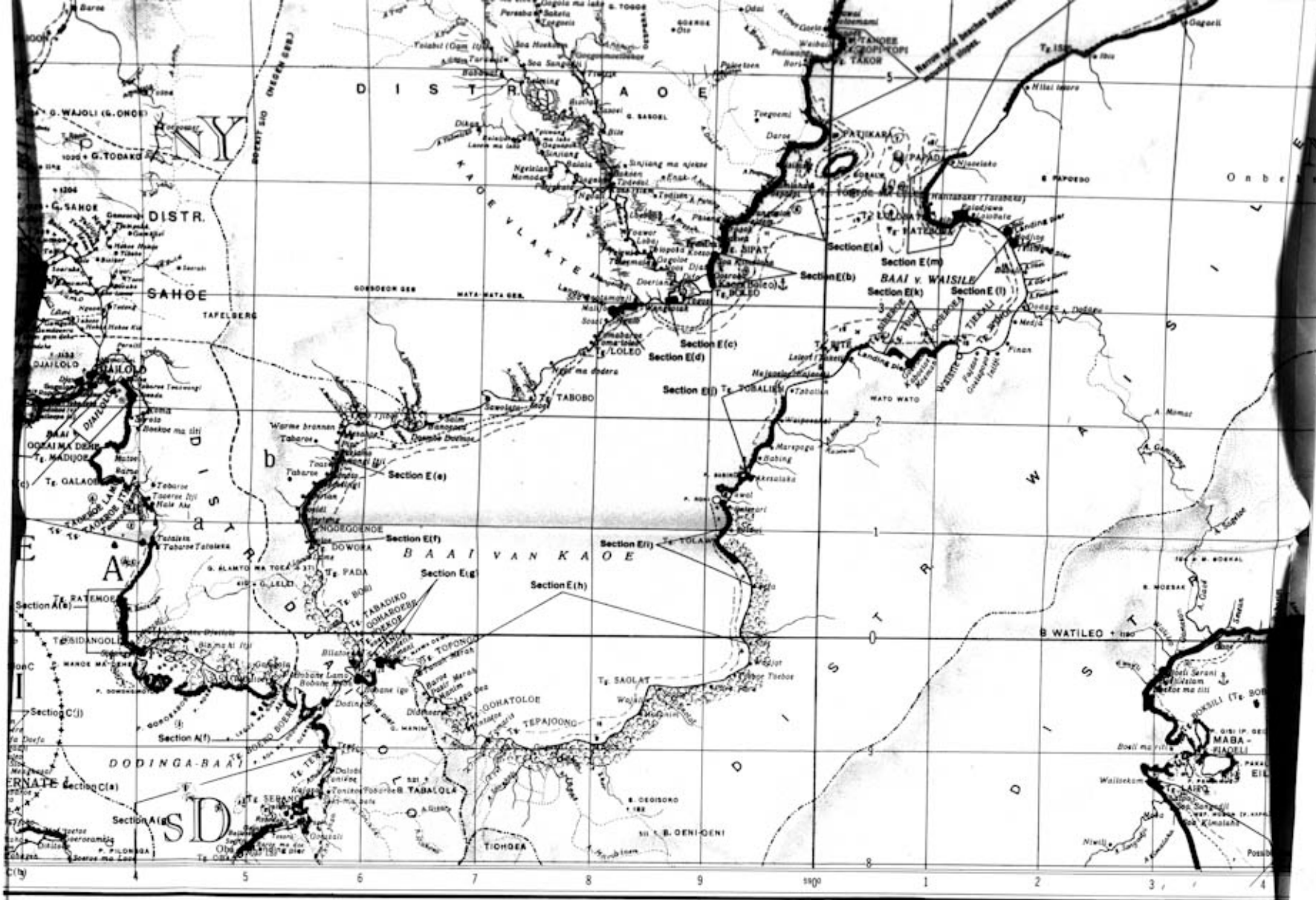
APPROXIMATE MEAN DECLINATION 1943
FOR CENTER OF SHEET
ANNUAL MAGNETIC CHANGE 1' INCREASE
DO NOT USE DIAGRAM EXCEPT TO OBTAIN
NUMERICAL VALUES OF ANGLES



HALMAHERA

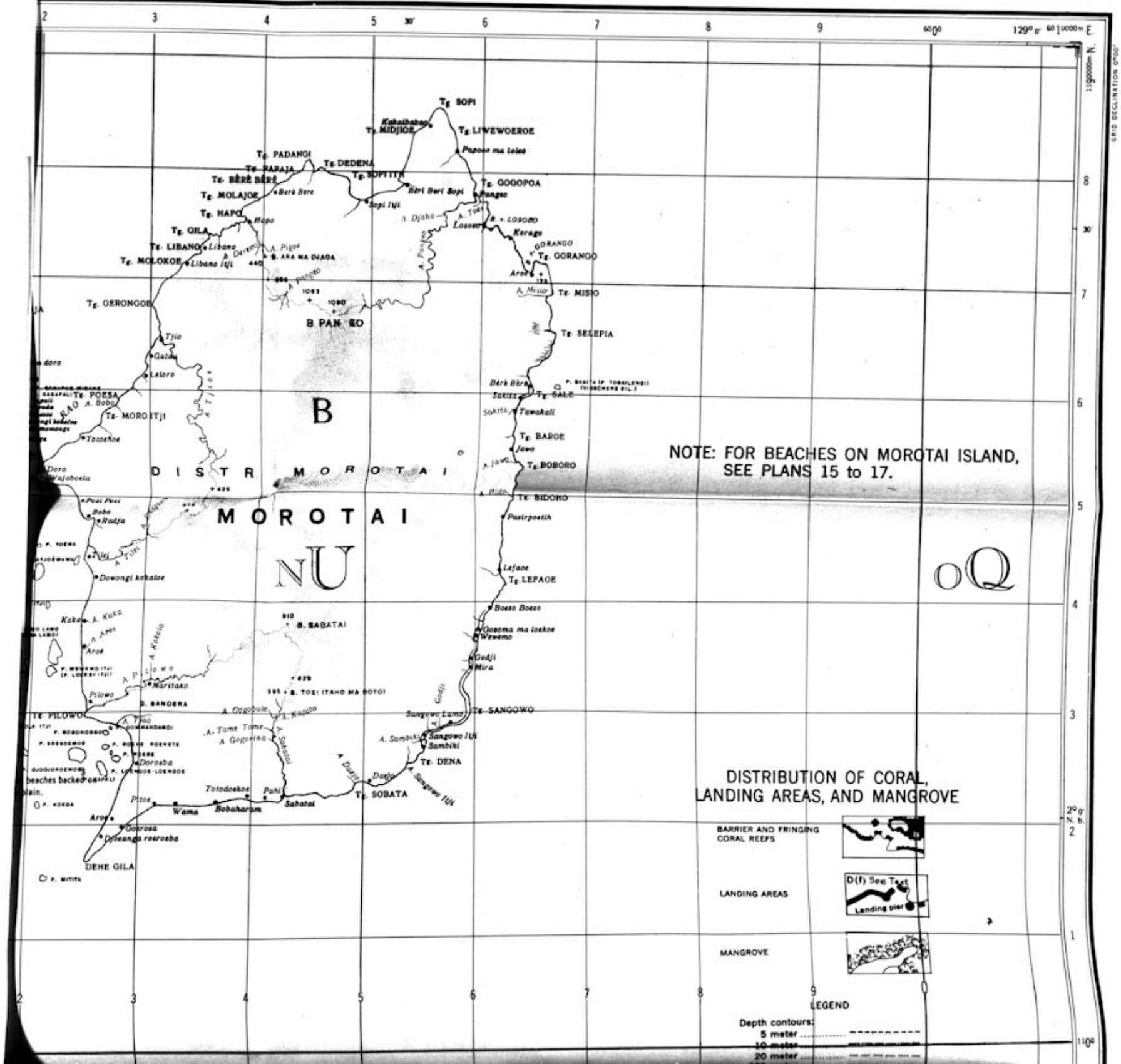


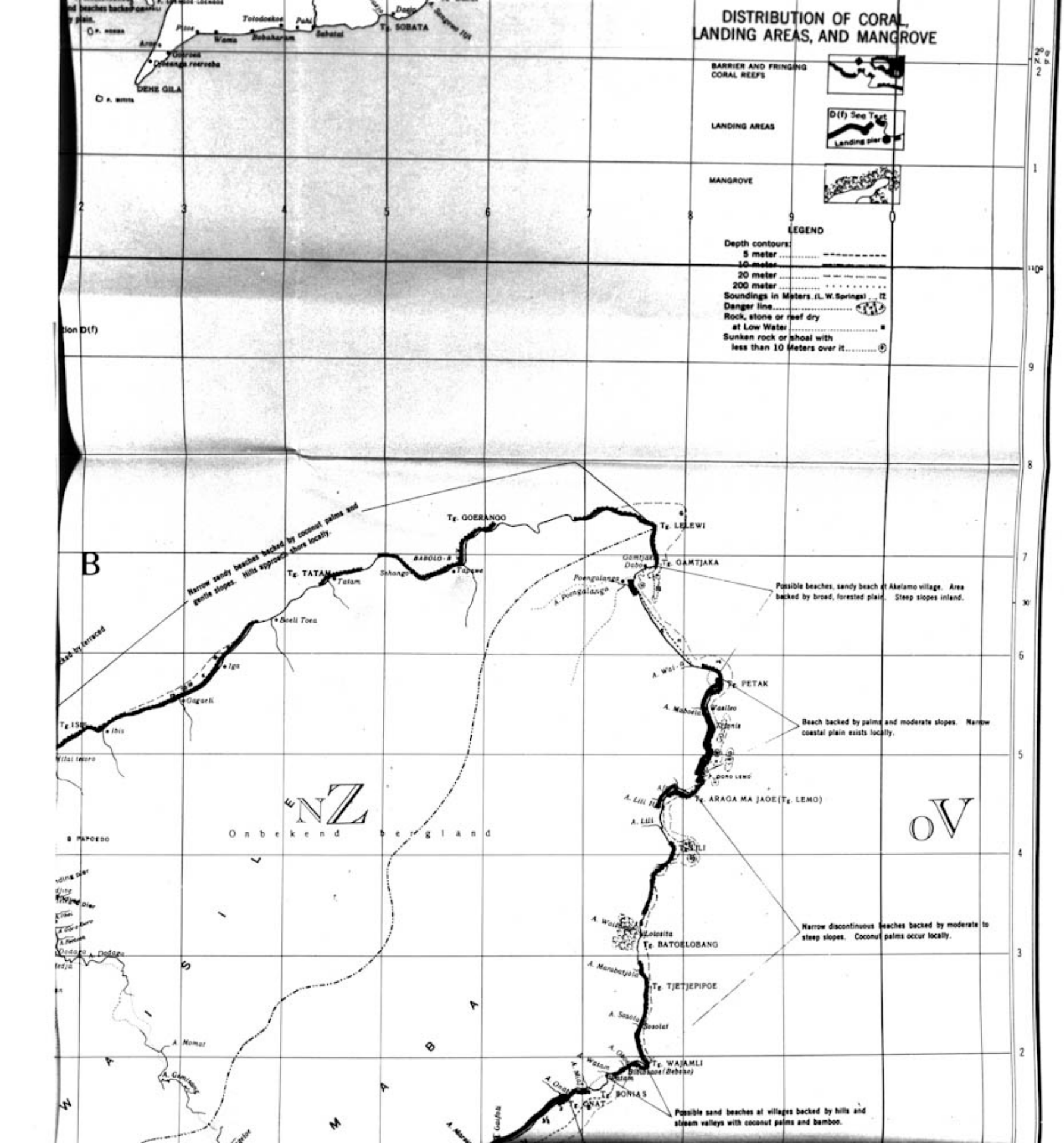
Stretches of coral and volcanic sand beaches backed on north by steep slopes, on south by plain.
sandy beaches backed by steep slopes at villages between rocky points. Heavy surf December to
Tg. TIBOBO
Tg. LIBA
Tg. POE MA DADA
Tg. SAWOL
Tg. SARTAKO
Tg. SALOETA
Tg. SALIMORLI
G. AROE
G. DAMAR RADJA
G. SILO (LIMADE)
G. ROSTEGEKOTO
DISTR. LOLODA
DISTR. GALELA
BAAI v. GALELA
Section D(a)
Section D(b)
Section D(c)
Section D(d)
Section D(e)
Section D(f)
Section D(g)
Section D(h)
Section D(i)
DENE GILA
Dowora
Mamodjan
G. MAMDEJA
Tg. BOBANGKADA
ZUID-LOLODA EILANDEN
swampy at village.
Tabaroe Djano (Djano Tali ma ados)
TOBELO-EILANDEN
TOBELO
Tg. TOBALAJA
DISTR. TOBELO
G. DOEKONO
G. SAMIDIEN
TOGOHI
G. KOTAE
Tg. GODIGO
Tg. LANGO
T. Todoe
G. TOKITO
G. RAOE
T. Lina
T. Patja
Tg. WAILOEBI
Tg. GONGA
Landing pier
G. SOPOE
G. IBOE
TOBAROE GEB.
DISTR. IBOE
G. GAMKONORA
1705
B
III
Narrow sandy beaches backed by coral gentle slopes. Hills approach shore
Narrow sand beaches between cliffs backed by terraced mountain slopes.
G. TAGISORO
G. TOGOE
DISTR. KAOE
KAOE VLAKTE
Tg. TAKOR
Tg. ISE
Igo
Gagaeli
Hilal tetoro
G. SASOEL
G. WAJOLI (G. ONOE)
G. TODAKO
NY
DISTR. SAHOE
G. SAHOE
TAFELBERG
GORSOSON GEB.
MATA-MATA GEB.
PATIKARA
PAPADA
Tg. BATELOLO
BAAI v. WAISILE
Section E(a)
Section E(b)
Section E(c)
Section E(d)
Section E(e)
Section E(j)
Section E(k)
Section E(l)
Section E(m)
Tg. SIPAT
Tg. KOLEO
Tg. LOLEO
Tg. TABOBO
Tg. TOBALIEN
Tg. BITE
Landing pier
WATO WATO
A. Momat
G. DJAILOLO
DJAILOLO
BAAI v. GOEAI MA DENE
Tg. MADJOE
Tg. GALAOE
Warme bronnen
b
Onbek
D I S
W A

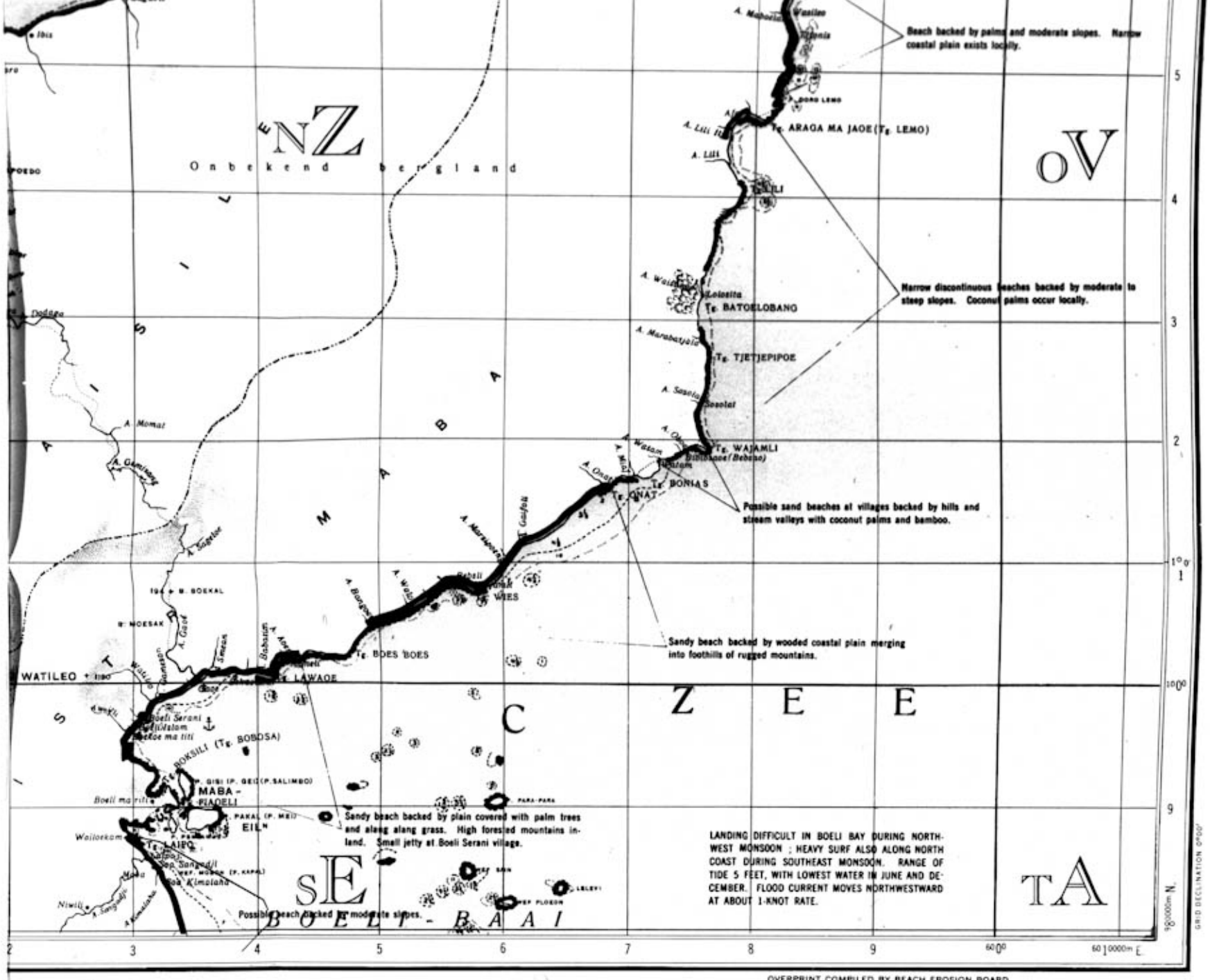

DISTR. KAOE
DISTR. SAHOE
DISTR. WATILEO
B. KAOE
BAAI VAN KAOE
DODINGA-BAAI
Section E(a)
Section E(b)
Section E(c)
Section E(d)
Section E(e)
Section E(f)
Section E(g)
Section E(h)
Section E(i)
Section E(k)
Section E(l)
Section E(m)
Section A(e)
Section A(f)
Section A(g)
Section C(a)
Section C(j)
Section C(h)
Scale 1:300,000
10 5 0 10 20 Miles
10 5 0 10 20 30 Kilometers
NETHERLANDS EAST INDIES EQUATORIAL ZONE GRID (Blue)
Projection: Lambert Conical Orthomorphic
Spheroid: Bessel
Origin: Equator and 110°E
False Co-ordinates of Origin: 3,900,000 meters East 900,000 meters North
Scale Factor: .997
ADMINISTRATIVE
Afdeeling is equivalent to
Onderafdeeling is next
next is the district
The boundary lines of the
Districts are not very

FIRST EDITION - AMS 1

SHEET NO. 1




DISTRIBUTION OF CORAL, LANDING AREAS, AND MANGROVE



OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY
ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 100277
6-43 1943

GRID DECLINATION 0°00'

ADMINISTRATIVE UNITS

Afdeeling is equivalent to state or province.
Onderafdeeling is next sub-division; next is the district

The boundary lines of the Onderafdeelings and Districts are not very accurate.

ABBREVIATIONS

A = River, Stream	P = Island
S = River	G = Mountain
T = Lake	B = Mt, Hill
B = Bay	Tg = Cape
Str = Strait	Eiln = Islands

LEGEND

Seat of Resident	R.	Boundary of Afdeeling	+ + + +
Seat of Controller	C.	Boundary of Sub-Afdeeling	
Seat of Administrator	G.H.	Boundary of District	
Seat of District Chief		Carriage Road	
Inhabited Place		Bridle Path	
Garrison		Footpath	
Harbor Open for Trade		Elevation in Meters	+ 100

MOLUKKEN ISLANDS, HALMAHERA

This oversized item has been
filmed in sections

PLAN 6 JANIS No. 155 [redacted]

SOUTHERN HALMAHERA—Hydrography, landing areas, coral, and mangrove

MOLUKKEN ISLANDS, 1:300,000
HALMAHERA

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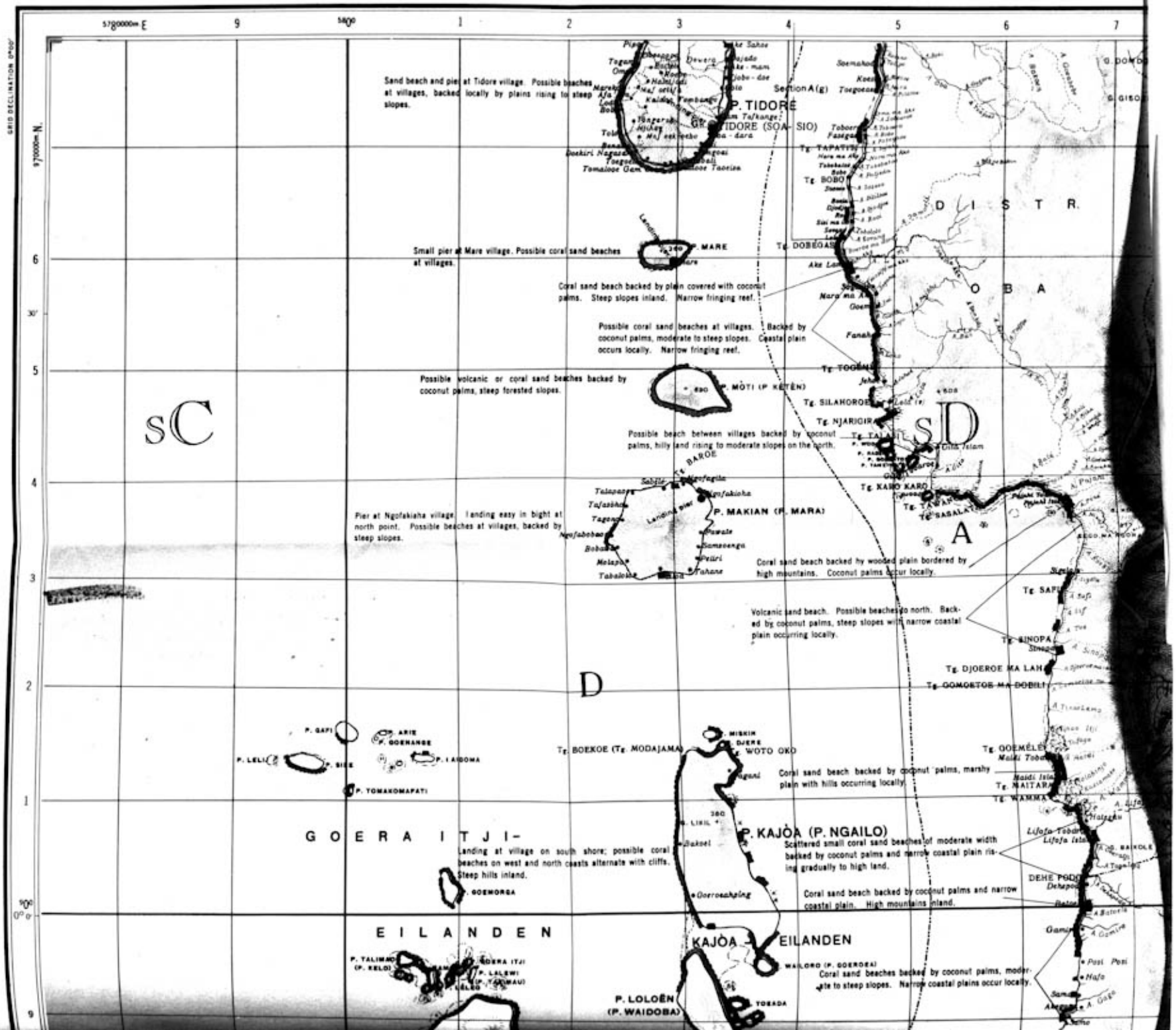
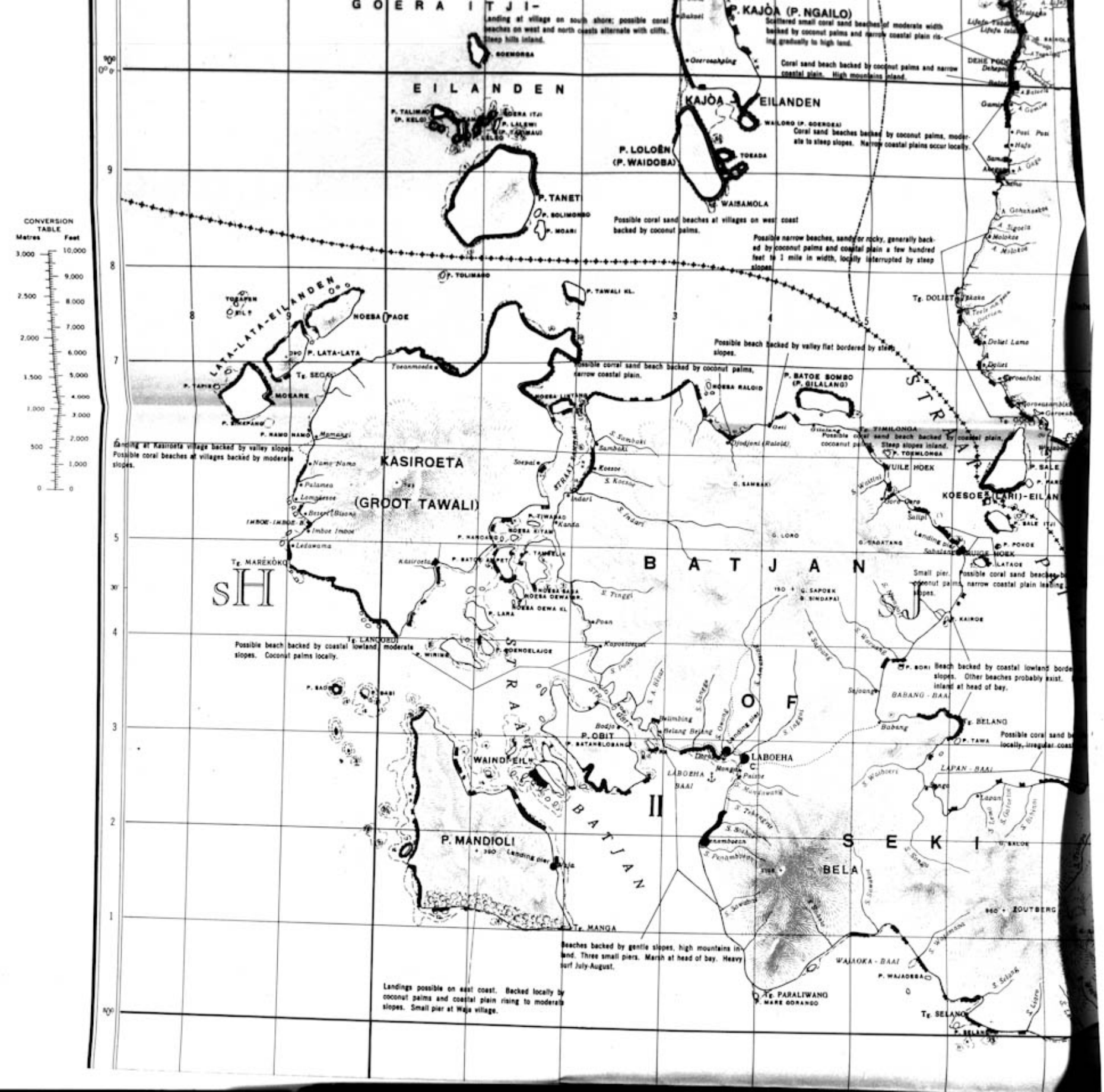
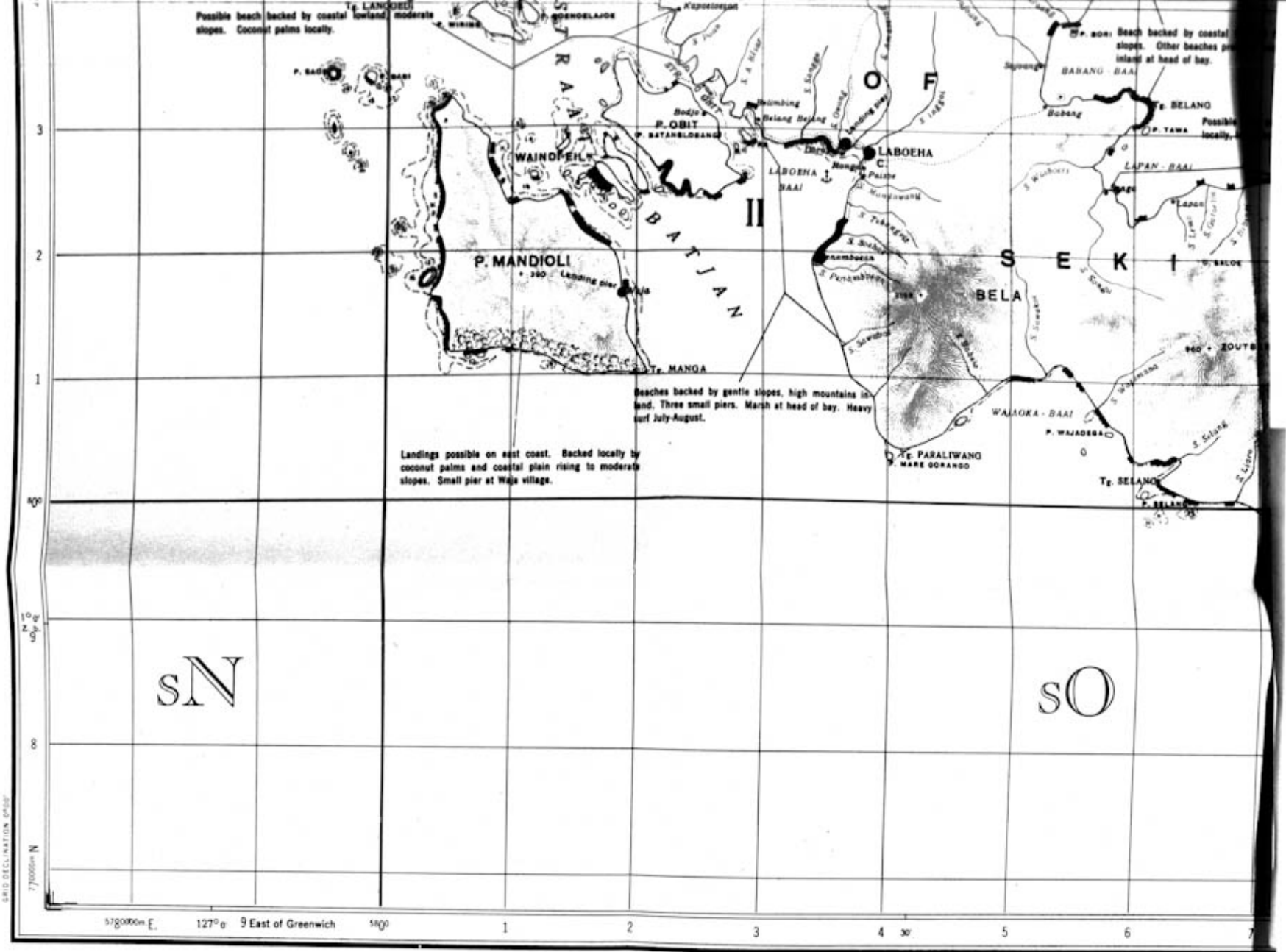



CONVERSION TABLE
Metres
Feet
3,000
10,000
2,500
8,000
2,000
6,000
1,500
5,000
1,000
4,000
500
3,000
2,000
1,000
0
0
GOERA ITJI-
Landing at village on south shore; possible coral beaches on west and north coasts alternate with cliffs. Steep hills inland.
P. GOEMORSA
P. KAJOA (P. NGAILO)
Scattered small coral sand beaches of moderate width backed by coconut palms and narrow coastal plain rising gradually to high land.
Coral sand beach backed by coconut palms and narrow coastal plain. High mountains inland.
EILANDEN
KAJOA EILANDEN
WAILORO (P. GOEMORSAI)
Coral sand beaches backed by coconut palms, moderate to steep slopes. Narrow coastal plains occur locally.
P. LOLOEN (P. WAIDOBA)
TORADA
P. TANET
P. SOLIMONDO
P. MOARI
WAISAMOLA
Possible coral sand beaches at villages on west coast backed by coconut palms.
Possible narrow beaches, sandy or rocky, generally backed by coconut palms and coastal plain a few hundred feet to 1 mile in width, locally interrupted by steep slopes.
P. TOLIMADO
P. TAWALI KL.
LATA-LATA-EILANDEN
NOESA PADE
P. LATA-LATA
Tg. SEGAI
MOSARE
P. KAMPANG
P. KAMO NAMO
Landing at Kasiroeta village backed by valley slopes. Possible coral beaches at villages backed by moderate slopes.
Possible beach backed by valley flat bordered by steep slopes.
Possible coral sand beach backed by coconut palms, narrow coastal plain.
P. BATOE SOMBO (P. GILALANG)
NOESA RALOID
Tg. TIMLONGA
Possible coral sand beach backed by coastal plain, cocoanut palms. Steep slopes inland.
P. TOEMLONGA
TUILE HOEK
KOESOE (LARI)-EILAN
KASIROETA
(GROOT TAWALI)
P. TIWABAD
P. HANDANG
P. BATOE ANTJET
NOESA BAJA
NOESA DEWA BP.
NOESA DEWA KL.
P. LARA
P. GOENOELAJOE
Possible beach backed by coastal lowland, moderate slopes. Coconut palms locally.
Tg. MARÉKÖKÖ
Tg. LANGOBOLI
B A T J A N
STRAAT BATJAN
Small pier. Possible coral sand beaches b... coconut palms, narrow coastal plain leading ... slopes.
P. KAIROE
P. BOKI
Beach backed by coastal lowland borde... slopes. Other beaches probably exist. ... inland at head of bay.
BABANG - BAAI
Tg. BELANG
P. TAWA
Possible coral sand b... locally, irregular coas...
P. OBIT
P. BATANGLOBANGI
WAINDEIL
LABOEHA
LABOEHA BAAI
LAPAN - BAAI
P. MANDIOLI
+ 350 Landing pier
Tg. MANGA
S E K I
BELA
960 + ZOUTBERG
WAJAOKA - BAAI
P. WAJADEBA
Tg. PARALIWANG
P. MARE GORANGO
Tg. SELANG
Beaches backed by gentle slopes, high mountains inland. Three small piers. Marsh at head of bay. Heavy surf July-August.
Landings possible on east coast. Backed locally by coconut palms and coastal plain rising to moderate slopes. Small pier at Waja village.



AMS T461.
First Edition 1943.

Prepared under the direction of the Chief of Engineers, U. S. Army, 1943. Copied from a Dutch Map dated 1918.

HYDROGRAPHY FROM NETHERLANDS HYDRO. CHARTS 385, 389, 390 & 404

APPROXIMATE MEAN DECLINATION 1943
FOR CENTER OF SHEET
ANNUAL MAGNETIC CHANGE 1' INCREASE

DO NOT USE DIAGRAM EXCEPT TO OBTAIN NUMERICAL VALUES OF ANGLES

10

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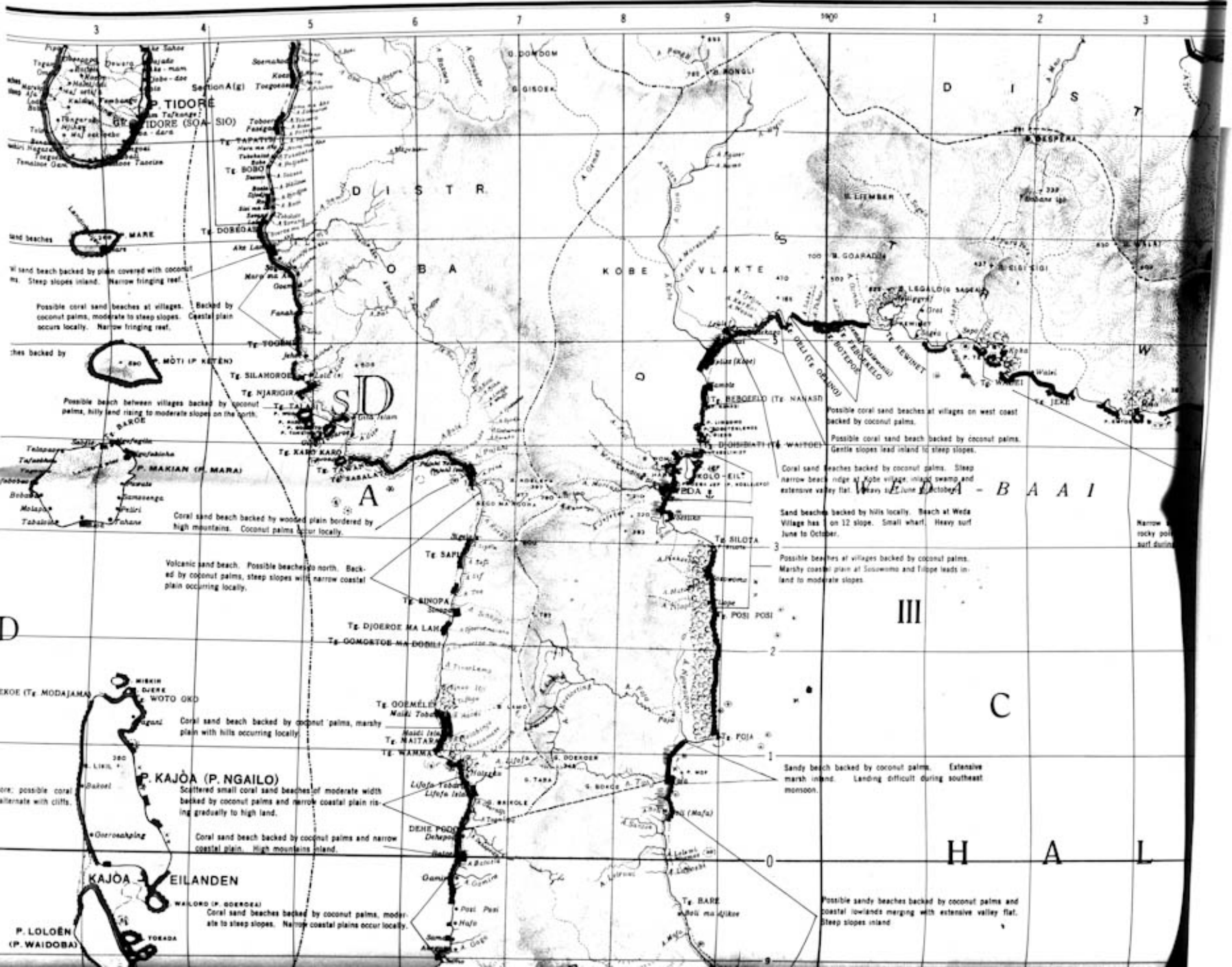
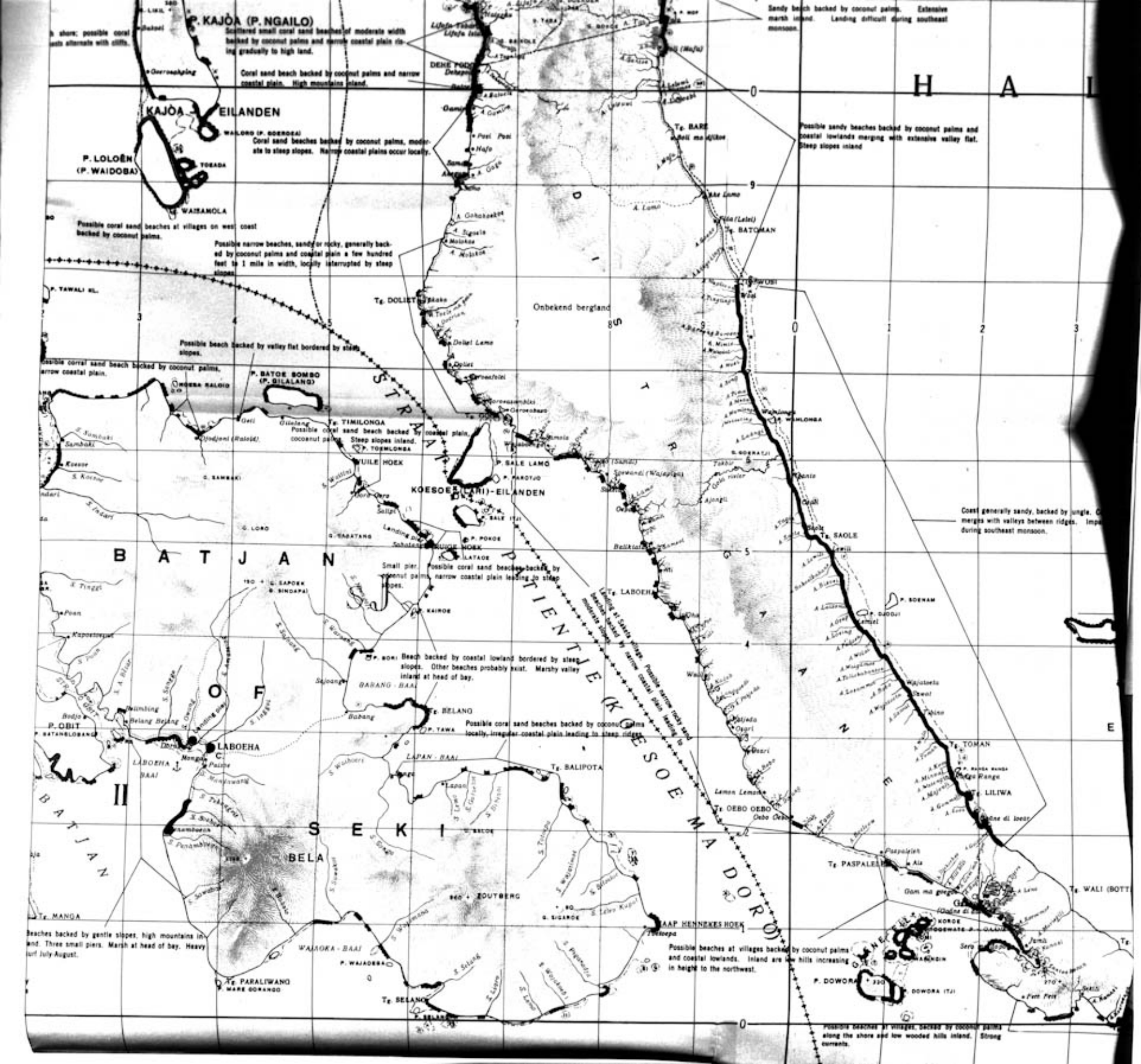
HALMAHERA




P. KAJOA (P. NGAILO)
Scattered small coral sand beaches of moderate width backed by coconut palms and narrow coastal plain rising gradually to high land.
Coral sand beach backed by coconut palms and narrow coastal plain. High mountains inland.
KAJOA EILANDEN
Coral sand beaches backed by coconut palms, moderate to steep slopes. Narrow coastal plains occur locally.
P. LOLOEN (P. WAIDOBA)
WAIRAMOLA
Possible coral sand beaches at villages on west coast backed by coconut palms.
Possible narrow beaches, sandy or rocky, generally backed by coconut palms and coastal plain a few hundred feet to 1 mile in width, locally interrupted by steep slopes.
Possible beach backed by valley flat bordered by steep slopes.
Possible corral sand beach backed by coconut palms, narrow coastal plain.
P. BATOE BOMBO (P. BILALANG)
Tg. TIMILONGA
Possible coral sand beach backed by coastal plain, coconut palms. Steep slopes inland.
KOESOE (LARI)-EILANDEN
Small pier. Possible coral sand beaches backed by coconut palms, narrow coastal plain leading to steep slopes.
Beach backed by coastal lowland bordered by steep slopes. Other beaches probably exist. Marshy valley inland at head of bay.
Possible coral sand beaches backed by coconut palms locally, irregular coastal plain leading to steep ridges.
LABOEHA
Beaches backed by gentle slopes, high mountains inland. Three small piers. Marsh at head of bay. Heavy surf July-August.
Possible beaches at villages backed by coconut palms and coastal lowlands. Inland are low hills increasing in height to the northwest.
Possible beaches at villages backed by coconut palms along the shore and low wooded hills inland. Strong currents.
Sandy beach backed by coconut palms. Extensive marsh inland. Landing difficult during southeast monsoon.
Possible sandy beaches backed by coconut palms and coastal lowlands merging with extensive valley flat. Steep slopes inland
Onbekend bergland
Coast generally sandy, backed by jungle, merges with valleys between ridges. during southeast monsoon.
STRAAT
BATJAN
PASSAGE
PASSAGE (KOESOE MADORO)
H A L
B A T J A N
O F
S E K I
Tg. DOLIST
Tg. BATOMAN
Tg. SAOLE
Tg. LABOEH
Tg. BELANG
Tg. BALIPOTA
Tg. TOMAN
Tg. LILIWA
Tg. PASPALES
Tg. WALI (BOTT
Tg. MANGA
Tg. PARALIWANG
Tg. BELANG
P. OBIT
P. DOWORA
BELA
ZOUTBERG
P. TAWALI KL.
P. SALE LAMO
P. SOENAM
P. DJOUDJI
P. DOWORA ITJI
P. WAJADEBA
P. BABANG
P. TAWA
P. POKOE
P. SALE ITJI
P. KAIROE
P. BARDYJO
P. ILATADE
P. WOMLONGA
P. TOEMLONGA
P. WOSI
P. BATOEMAN
P. BARE
P. DJOUDJI
P. SOENAM
P. LILIWA
P. PASPALES
P. DOWORA
P. WALI
P. BELANG
P. TAWA
P. WAJADEBA
P. BABANG
P. POKOE
P. SALE ITJI
P. KAIROE
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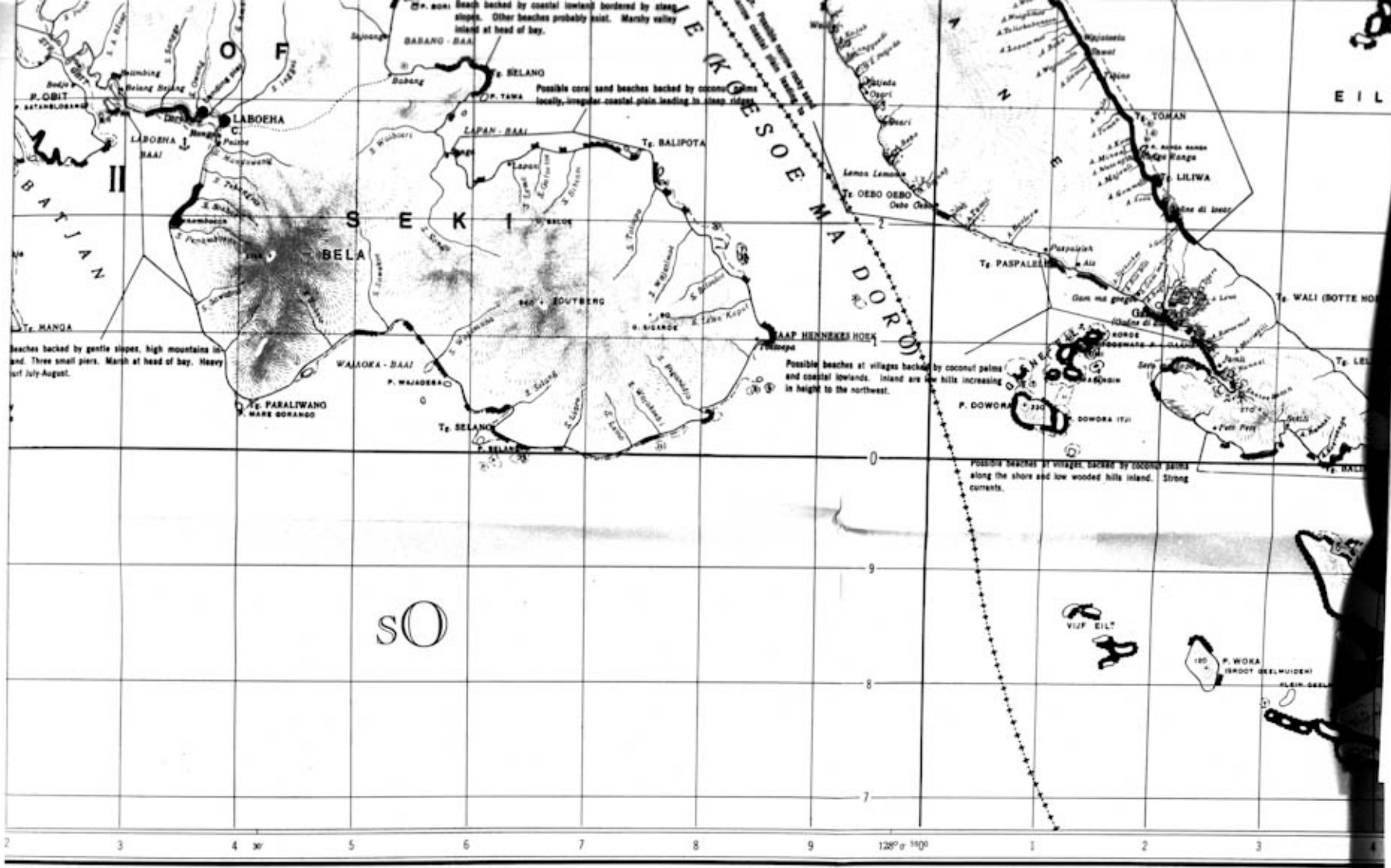
P. ILATADE
P. WOMLONGA
P. TOEMLONGA
P. WOSI
P. BATOEMAN
P. BARE



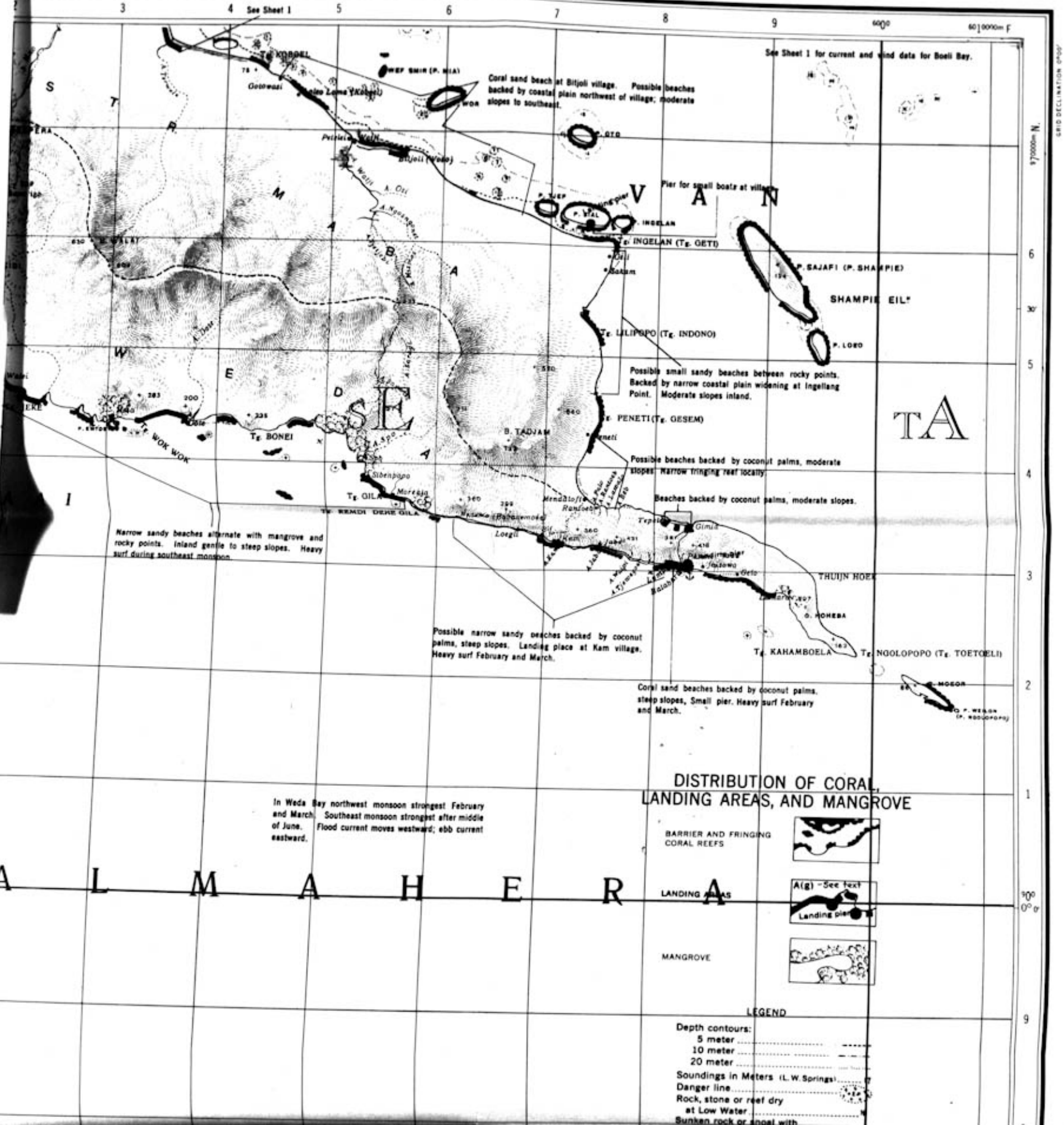
NETHERLANDS EAST INDIES EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin:	3,900,000 meters East 900,000 meters North
Scale Factor.	.997

ADMINISTRATIV

Afdeeling is equivalent to a
Onderafdeeling is next sub-
next is the district

The boundary lines of the O
Districts are not very accura


See Sheet 1
See Sheet 1 for current and wind data for Boeli Bay.
Coral sand beach at Bitjoli village. Possible beaches backed by coastal plain northwest of village; moderate slopes to southeast.
Pier for small boats at village
Tg. INGELAN (Tg. GETI)
P. SAJAFI (P. SHAMPIE)
SHAMPIE EIL*
Tg. LILIPOPO (Tg. INDONO)
Possible small sandy beaches between rocky points. Backed by narrow coastal plain widening at Ingellang Point. Moderate slopes inland.
Tg. PENETI (Tg. GESEM)
Possible beaches backed by coconut palms, moderate slopes. Narrow fringing reef locally.
Beaches backed by coconut palms, moderate slopes.
Narrow sandy beaches alternate with mangrove and rocky points. Inland gentle to steep slopes. Heavy surf during southeast monsoon.
Possible narrow sandy beaches backed by coconut palms, steep slopes. Landing place at Kam village. Heavy surf February and March.
Coral sand beaches backed by coconut palms, steep slopes, Small pier. Heavy surf February and March.
Tg. KAHAMBOELA
Tg. NGOLOPOPO (Tg. TOETOELI)
THUIJN HOEK
In Weda Bay northwest monsoon strongest February and March. Southeast monsoon strongest after middle of June. Flood current moves westward; ebb current eastward.
DISTRIBUTION OF CORAL, LANDING AREAS, AND MANGROVE
BARRIER AND FRINGING CORAL REEFS
LANDING AREAS
A(g) - See text
Landing pier
MANGROVE
LEGEND
Depth contours:
5 meter
10 meter
20 meter
Soundings in Meters (L.W. Springs)
Danger line
Rock, stone or reef dry at Low Water
Sunken rock or shoal with
ALMAHERA
WEDA BAY
STRAIT
SEA
P. WEDA
P. MOSOR
P. MOHEBA
P. INGELAN
P. LOEO
P. WEDA (P. NGOLOPOPO)
Tg. BONEI
Tg. GILA
Tg. KEMDI DERE GILA
B. TADJAM
T. WOK WOK
Gosowasi
Bitjoli (Wdo)
Loegil
Gimia
Oeto
Kam
Sibenpopo
Morekia
Mendatoffa
Randoetoe
Tg. KOBOEL
SRID DECLINATION 0°05'
9700000m N.
6000m E

in Weda Bay northwest monsoon strongest February and March. Southeast monsoon strongest after middle of June. Flood current moves westward; ebb current eastward.

ALMAHERA

LANDING AREAS, AND MANGROVE

BARRIER AND FRINGING CORAL REEFS

LANDING AREAS — A(g) - See text

MANGROVE

LEGEND

Depth contours:
5 meter
10 meter
20 meter
Soundings in Meters (L.W. Springs)
Danger line
Rock, stone or reef dry at Low Water
Sunken rock or shoal with less than 10 Meters over it

Coast generally sandy, backed by jungle. Coastal plain merges with valleys between ridges. Impassable surf during southeast monsoon.

sK

tF

Numerous small coral sandy beaches. Islands flat and densely wooded. Heavy surf at entrance to lagoon on west side at ebb tide.

WEDA-EILANDEN

EILAND VAARWEL

TOMAN

Tg. LILIWA

Tg. WALI (BOTTE HOEK)

Tg. LELEONGOESOE

Tg. SAWAT

Tg. HALIK

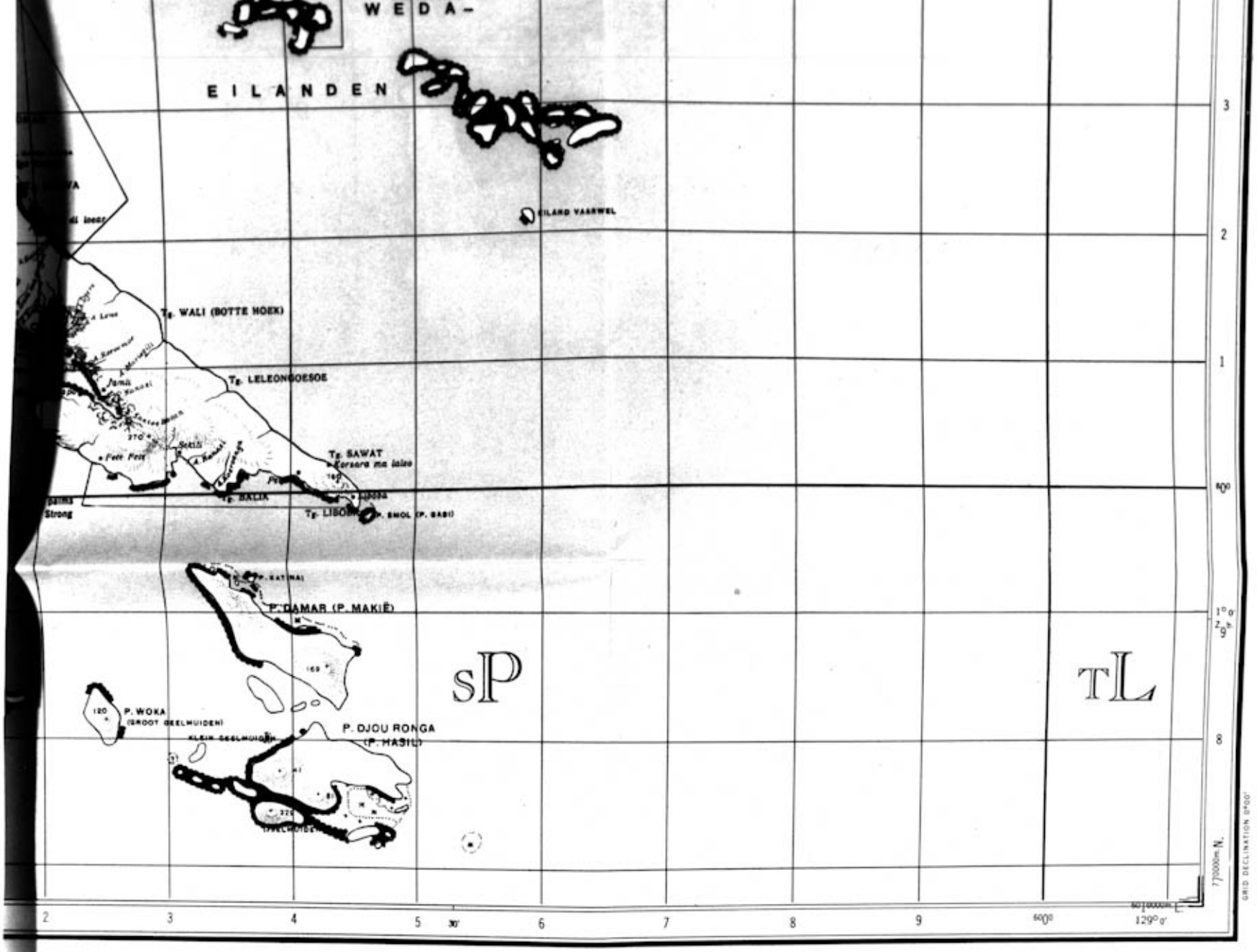
Tg. LIBOO

SMOL EP. BABU

Strong

2 3 4 5 6 7 8 9 0 1

1 2 3 4 5 6 7 8 9 10 11 12



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ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 100278
6-43 1943

20 Miles
FT
ters

ADMINISTRATIVE UNITS

Afdeeling is equivalent to state or province.
Onderafdeeling is next sub-division;
next is the district

The boundary lines of the Onderafdeelings and Districts are not very accurate.

ABBREVIATIONS

A = River, Stream	P = Island
S = River	G = Mountain
T = Lake	B = Mt. Hill
B = Bay	Tg = Cape
Str = Strait	Eiln = Islands

LEGEND

Seat of Resident	R.	Boundary of Afdeeling	+-+-+
Seat of Controller	C.	Boundary of Sub-Afdeeling	
Seat of Administrator	G.H.	Boundary of District	
Inhabited Place		Carriage Road	
Seat of District Chief		Bridle Path	
Garrison		Footpath	
Harbor Open for Trade		Elevation in Meters	100

MOLUKKEN ISLANDS, HALMAHERA

N043-E12653/155Sx209

[redacted]

MOLUCCAN ISLANDS 1:125,000

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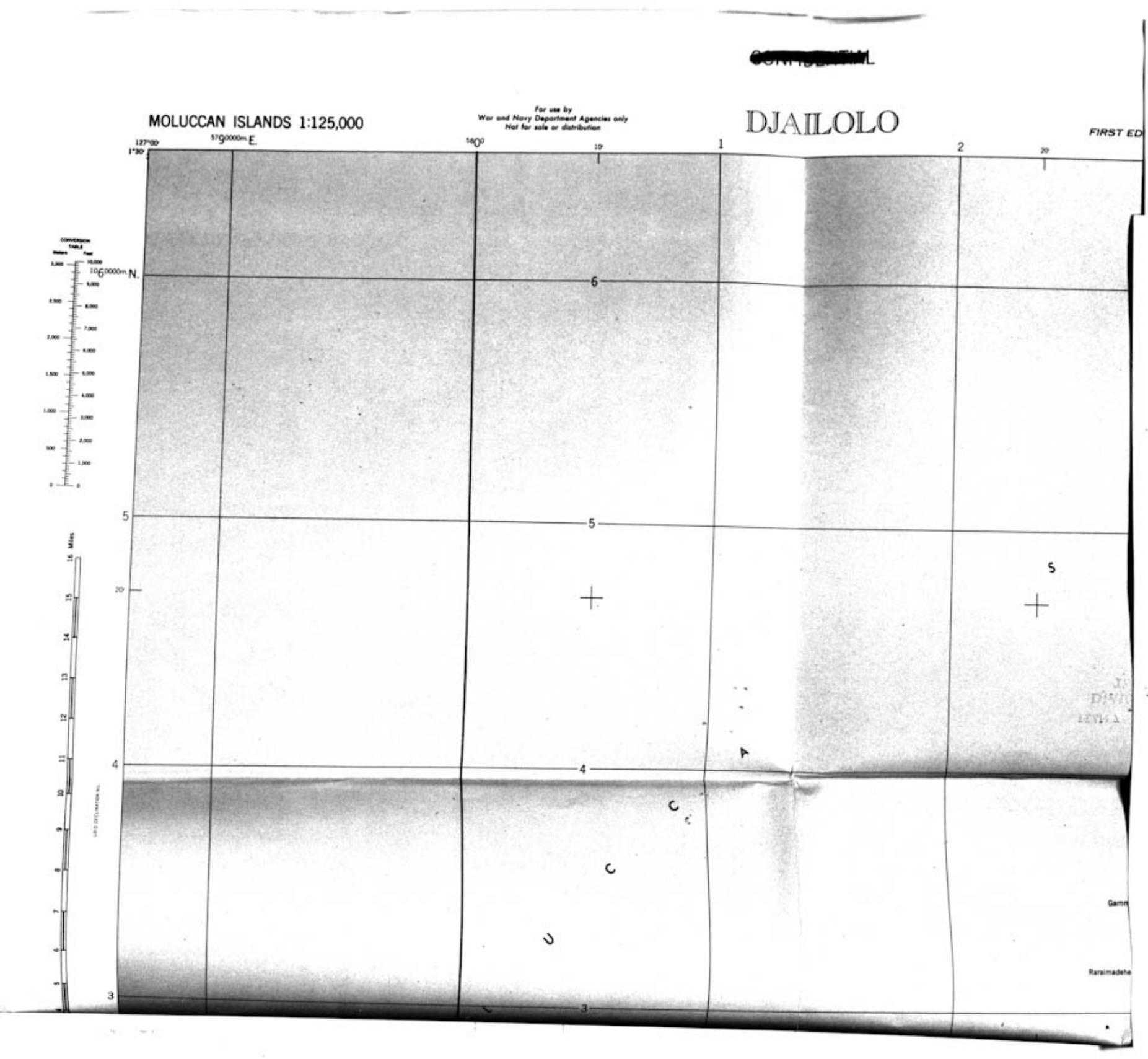
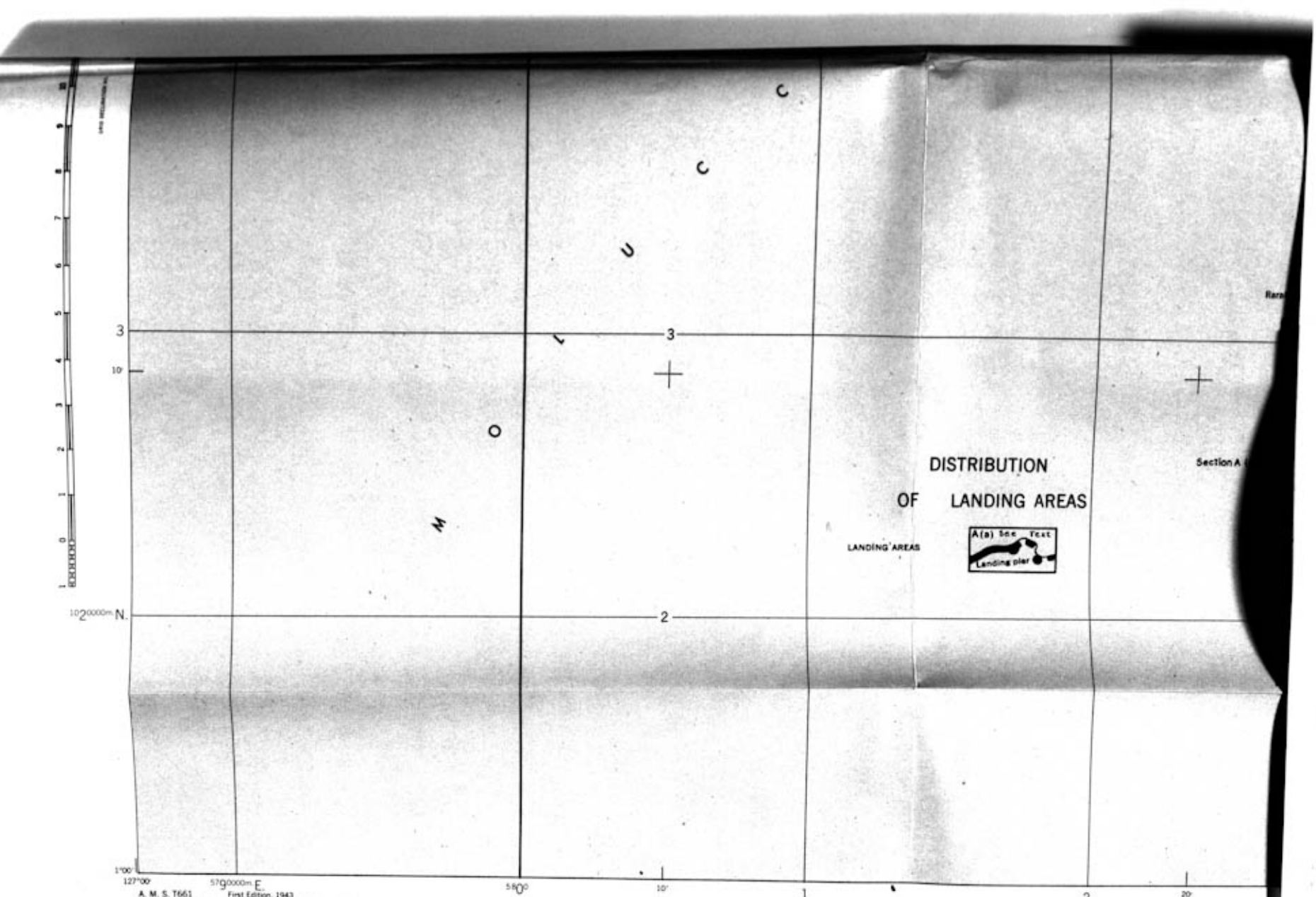
DJAILOLO

FIRST ED





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Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service Maps of Moluccan Islands, (Res. Ternate), 1:100,000 (1925, 1926).

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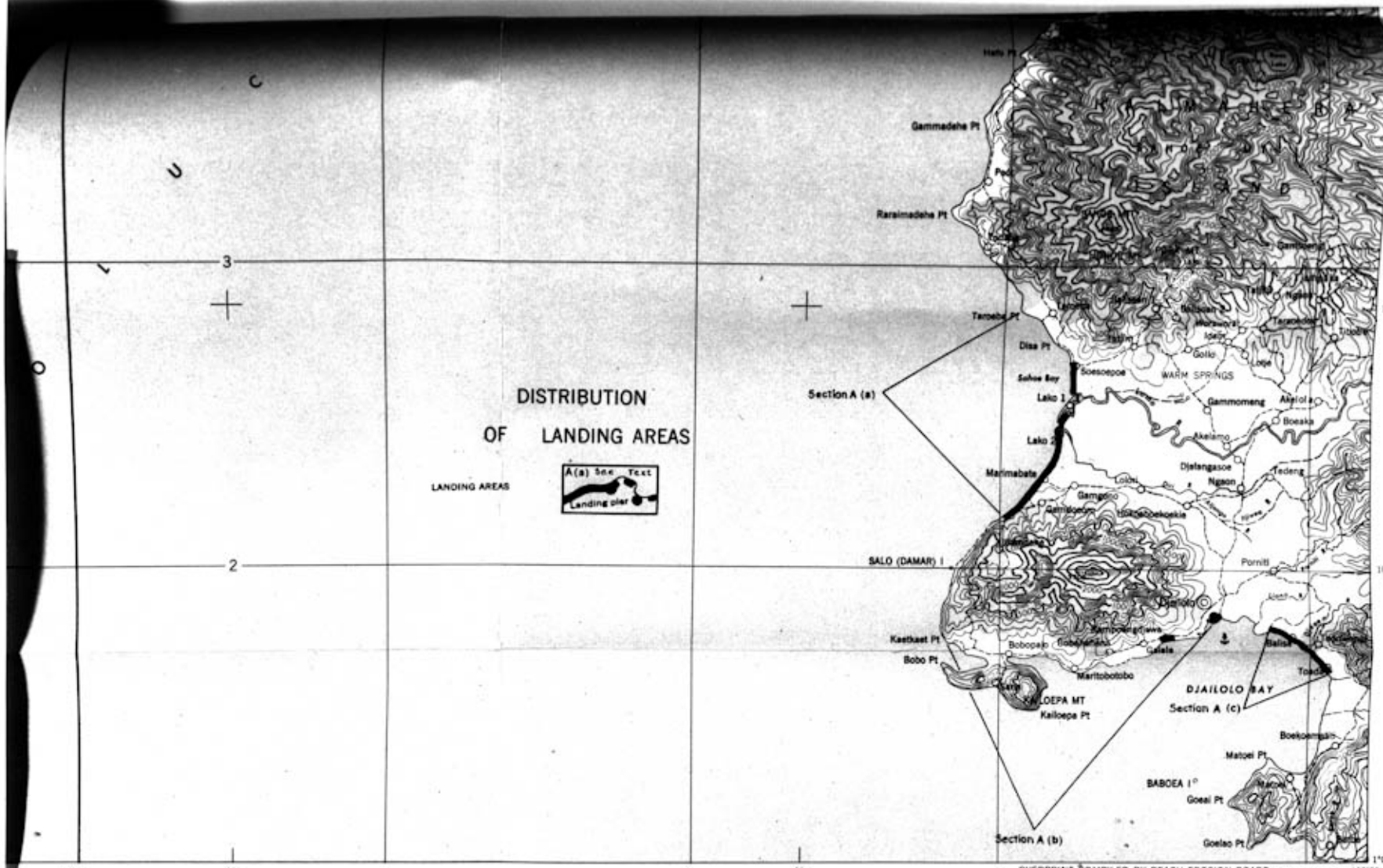
DJAILOLO

FIRST EDITION-AMS 1

PLAN NO. 7
JANIS 155
SHEET No. 6



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ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 1944

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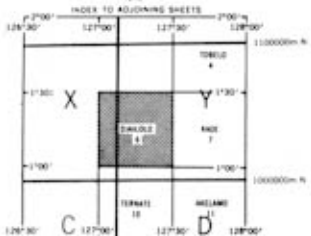

SCALE 1:125,000

Miles 0 1 2 3 4 5 6

Kilometers 0 1 2 3 4 5 6 7 8 9 10

Yards 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 100 FEET

HEIGHTS IN FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection: Lambert Conical Orthomorphic
Spheroid: Bessel
Equator & 115° East

TRUE NORTH
PRICE OR 58 MILS
MAGNETIC NORTH

APPROXIMATE MEAN DECLINATION 1943
ANNUAL MAGNETIC CHANGE 3 INCREASE
FOR CENTER OF SHEET

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East 29		North 33
REFERENCE	Y 2933	To nearest 1,000 metres

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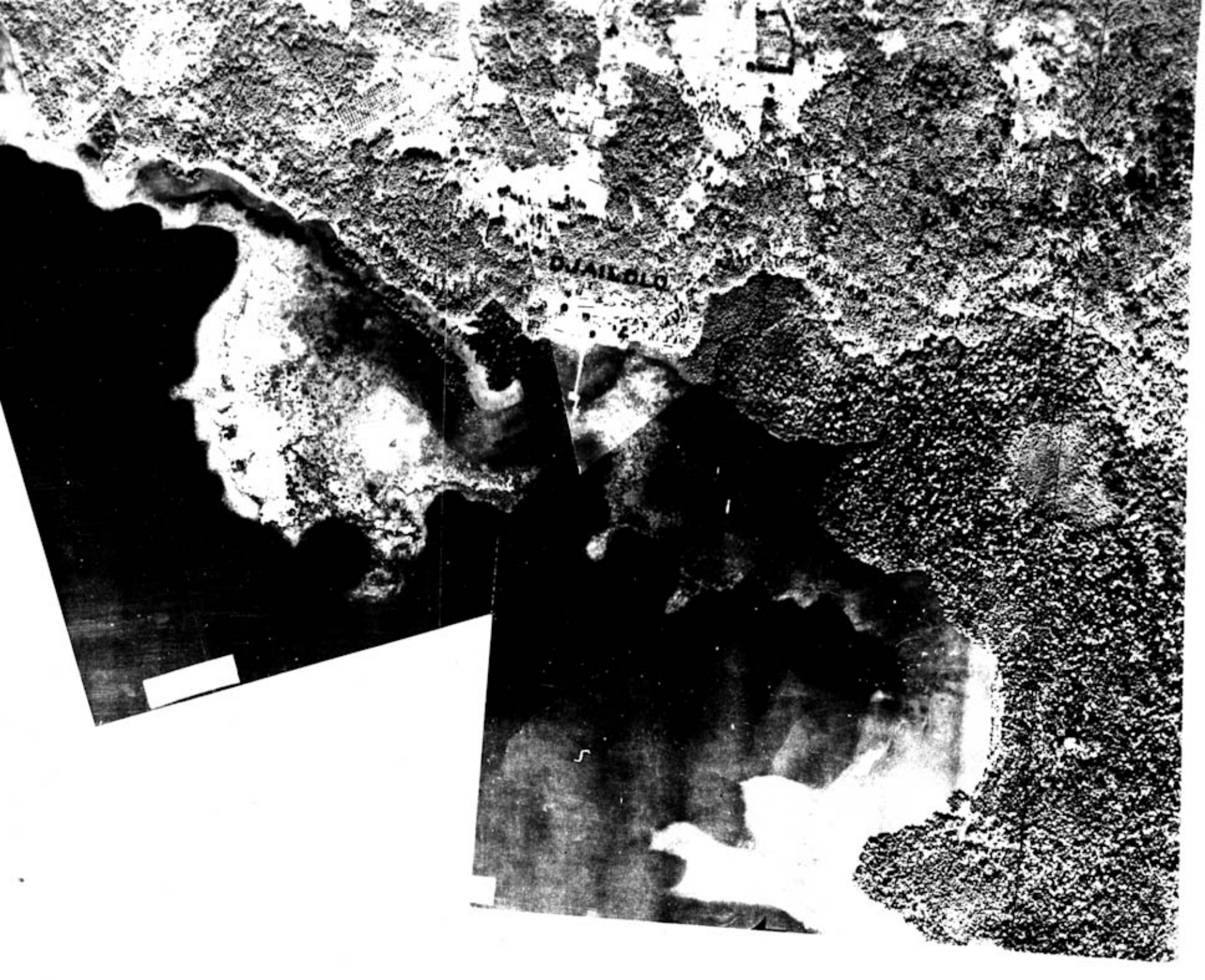
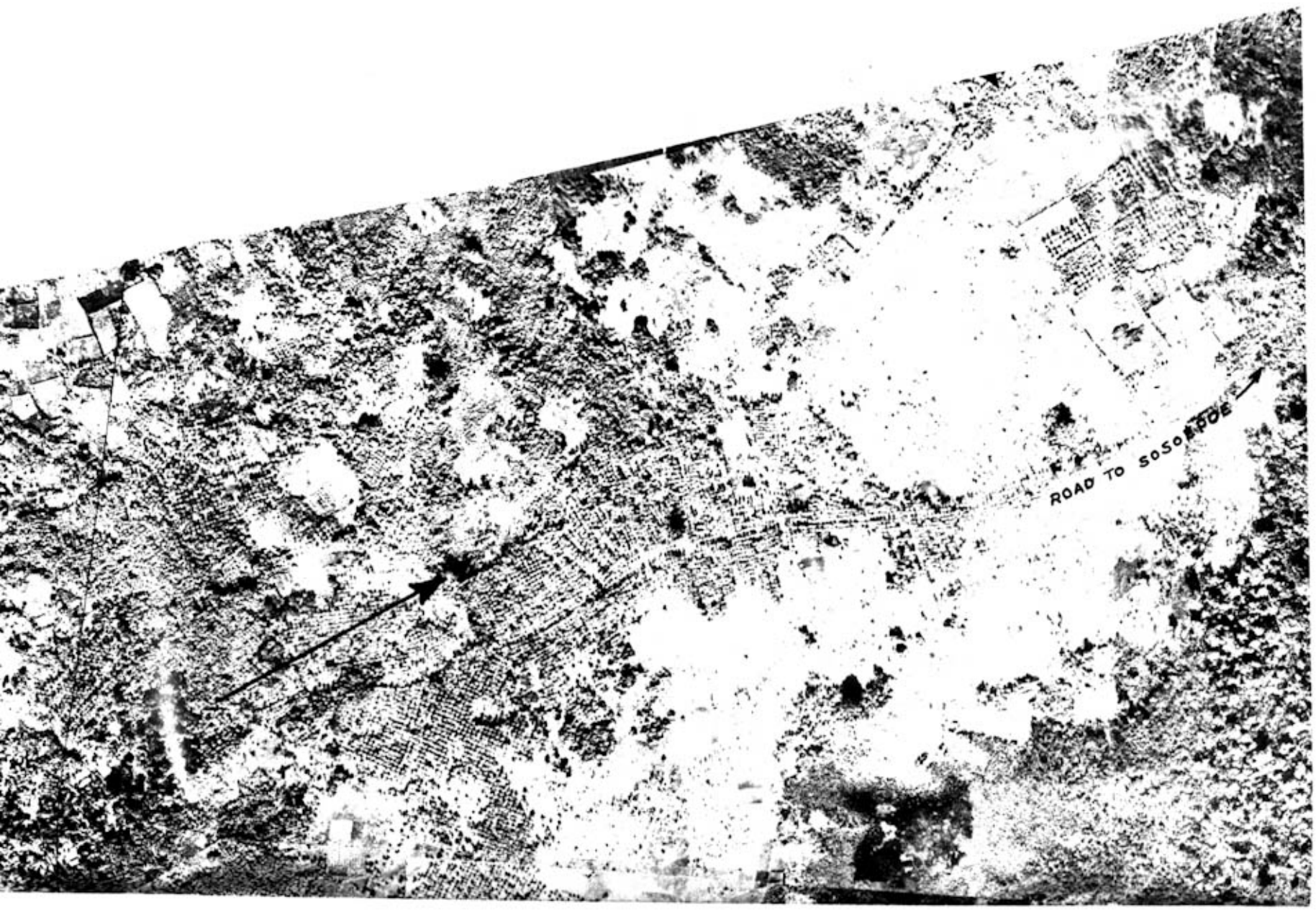
PLAN 8 JANIS No. 155 [redacted]

DJAILOLO AREA, HALMAHERA—
Aerial mosaic


DJAILOLO

PLAN NO.8
JANIS 155




PORNITI

item has been

tions

PLAN 9 JANIS No. 155 [redacted]

AKELAMO SHEET, HALMAHERA—
Topography and landing areas

C[redacted]

MOLUCCAN ISLANDS 1:125,000

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AKELAMO

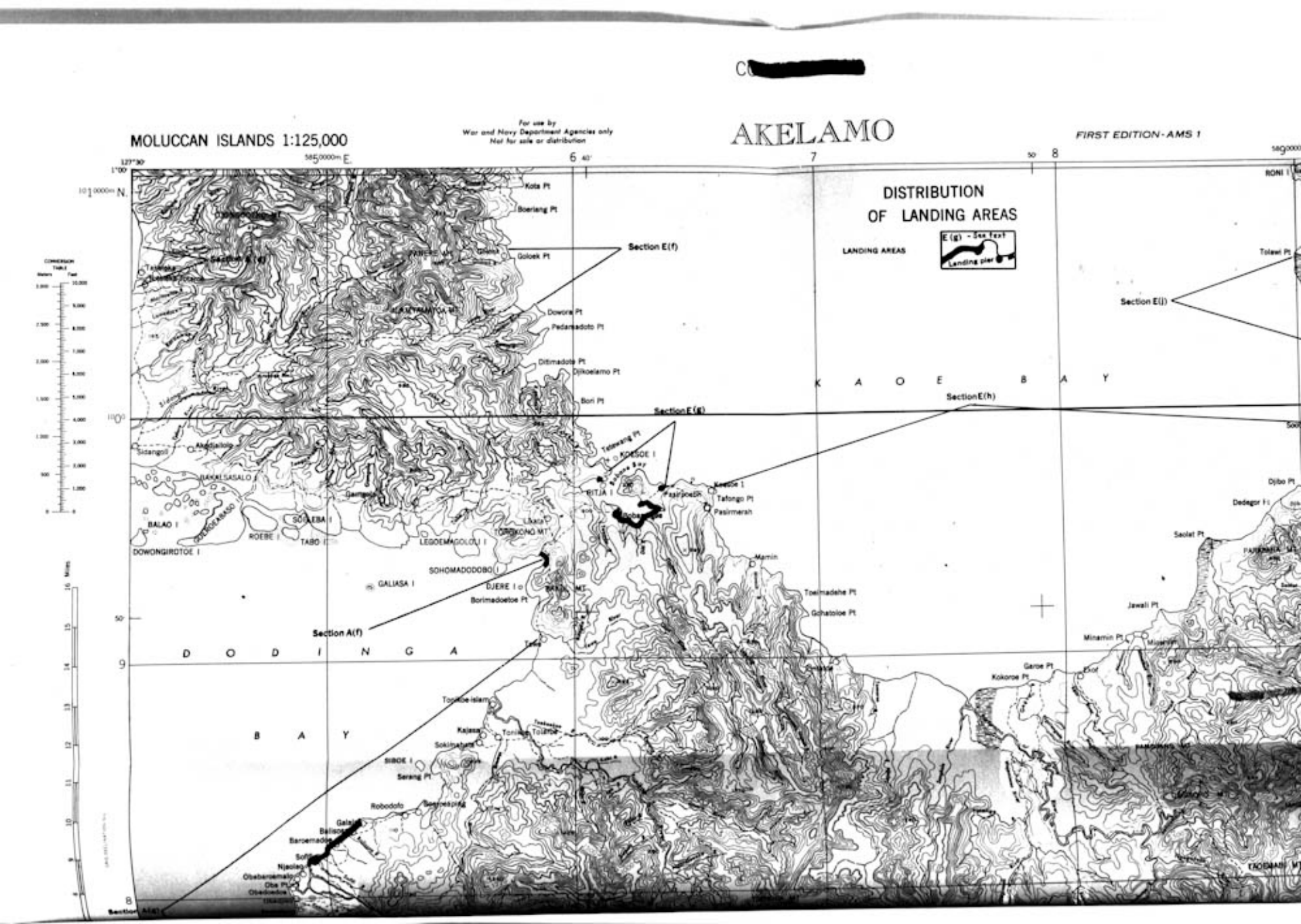
FIRST EDITION - AMS 1

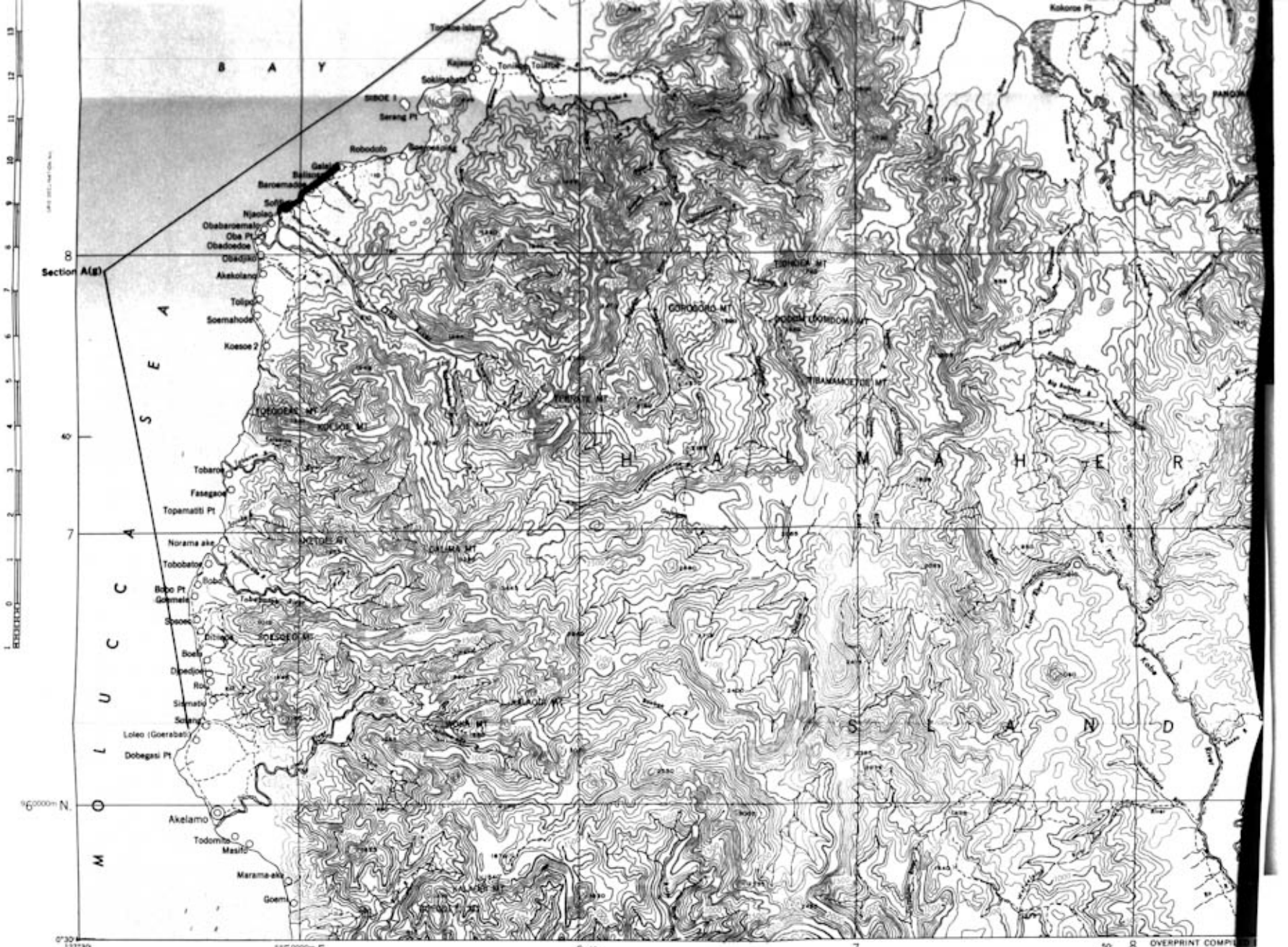
DISTRIBUTION OF LANDING AREAS

LANDING AREAS

E(g) - Sea Feet

Landing pier





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Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service maps of Moluccan Islands, (Res. Ternate), 1:100,000, (1925, 1926).

ROAD CLASSIFICATION

Primary Highways
Secondary Highways
Improved Roads
Unimproved Roads
Trail and Cart Tracks

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

SCALE 1:125,000

HEIGHTS IN FEET

Miles
Kilometers
Yards

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection	Lambert Conical Orthomorphic
Spheroid	Bessel
Origin:	Equator & 110° East
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North
Scale Factor	997

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AKELAMO

FIRST EDITION-AMS 1

PLAN NO.9
JANIS 155
SHEET No. 11

DISTRIBUTION OF LANDING AREAS

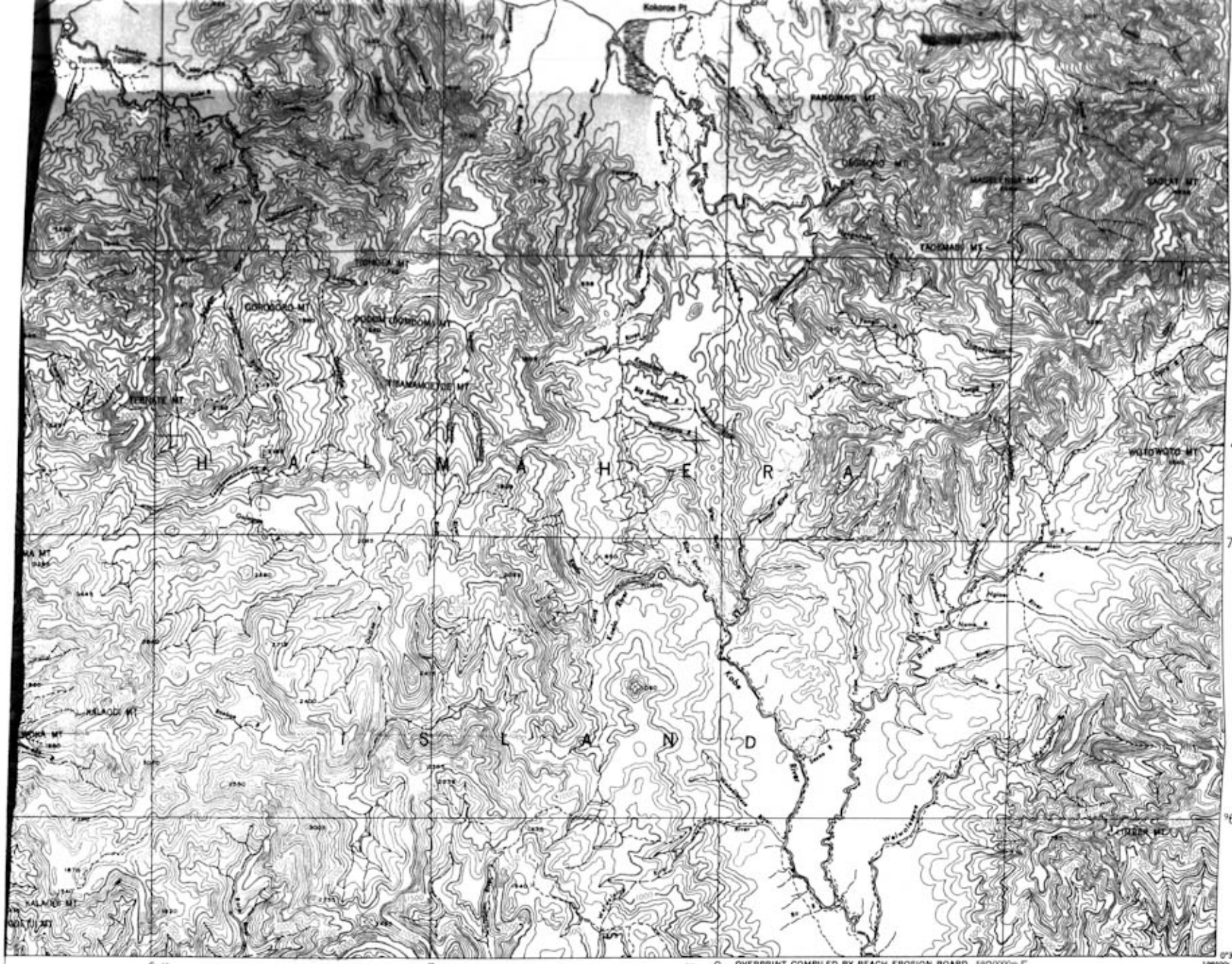
LANDING AREAS

E (g) - See text
Landing pier

Section E(f)
Section E(g)
Section E(h)
Section E(j)

6 40' 7 50' 8 560000m E. 128°00 1°00 1010000m N.

Kota Pt
Boerlang Pt
PAMETE MT
Goloek Pt
KALIMPAMATOA MT
Dowora Pt
Pedamadoto Pt
Ditimadoto Pt
Djikoelamo Pt
Bori Pt
K A O E B A Y
Telewang Pt
KOESOE I
Kaloesoe Bay
RITJA I
Kwesde I
Tafongo Pt
Pasirmerah
Likata
TOROKONG MT
LEGOEMAGOLOU I
SOHOMADODOBO I
GALIASA I
DJERE I
Borimadoetoe Pt
BANDA MT
Mamin
Toemadehe Pt
Gohatolobe Pt
G A
Tonolo-islam
Kajasa
Tonolo
Tolamoe
Sokimahate
SIBOE I
Serang Pt
Robodofo
Boemesoeng
RONI I
Tolawi Pt
Soot
Soot Pt
Djibo Pt
Dedegor I
Saolat Pt
PARAMATA MT
Jawali Pt
Minamin Pt
Garoe Pt
Kokoroe Pt
PANGINTO MT
MAGELEHOE MT
SAOLAT MT
KADAMBI MT
9
8



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SCALE 1:125,000

HEIGHTS IN FEET

1 0 1 2 3 4 5 6 Miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 Yards

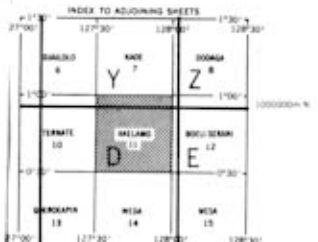
CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection: Lambert Conical Orthomorphic
Spheroid: Bessel

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS



APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE
FOR CENTER OF SHEET

TRUE NORTH
MAGNETIC NORTH

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. (108471)
1943
8-44

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POINT TEWE LETTERS D

East		North	
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. Estimate tenths Eastwards	5 9	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. Estimate tenths Northwards	9 1
East	59	North	91

REFERENCE D5991 To nearest 1,000 metres

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PLAN 10 JANIS No. 155 [redacted]

TERNATE SHEET—Topography, landing areas, and coral

MOLUCCAN ISLANDS 1:125,000

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TERNATE

FIRST EDITION - AMS 1

DISTRIBUTION OF LANDING AREAS

LANDING AREAS

C(a) - See text

Landing place

Section B (a)

Section B (b)

Section C (g)

Section C (h)

Section C (f)

Section C (e)

Section C (d)

Section C (c)

Section C (b)

TERNATE ISLAND

MT GAMALAMA

MAITARA I

TIDORE

Ternate

M O L U C C A

G A M M E L A M A

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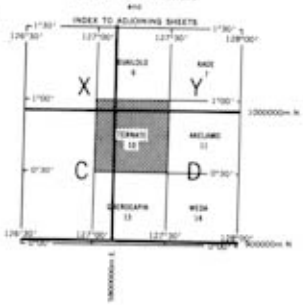
Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service maps of Moluccan Islands, (Res. Ternate), 1:100,000, (1925, 1926).

ROAD CLASSIFICATION

Primary Highways
Secondary Highways
Improved Roads
Unimproved Roads
Trail and Cart Tracks

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS



SCALE 1:125,000

Miles
Kilometers
Yards

CONTOUR INTERVAL 500 FEET

HEIGHTS IN FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 110° East
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North
Scale Factor	.997

NOTE: Officers using this map will make hordor corrections and additions which come to their attention and will direct to the Chief of Engineers, Washington, D. C.

APPROXIMATE MEAN DECLINATION 1943
ANNUAL MAGNETIC CHANGE 3' INCREASE
FOR CENTER OF SHEET

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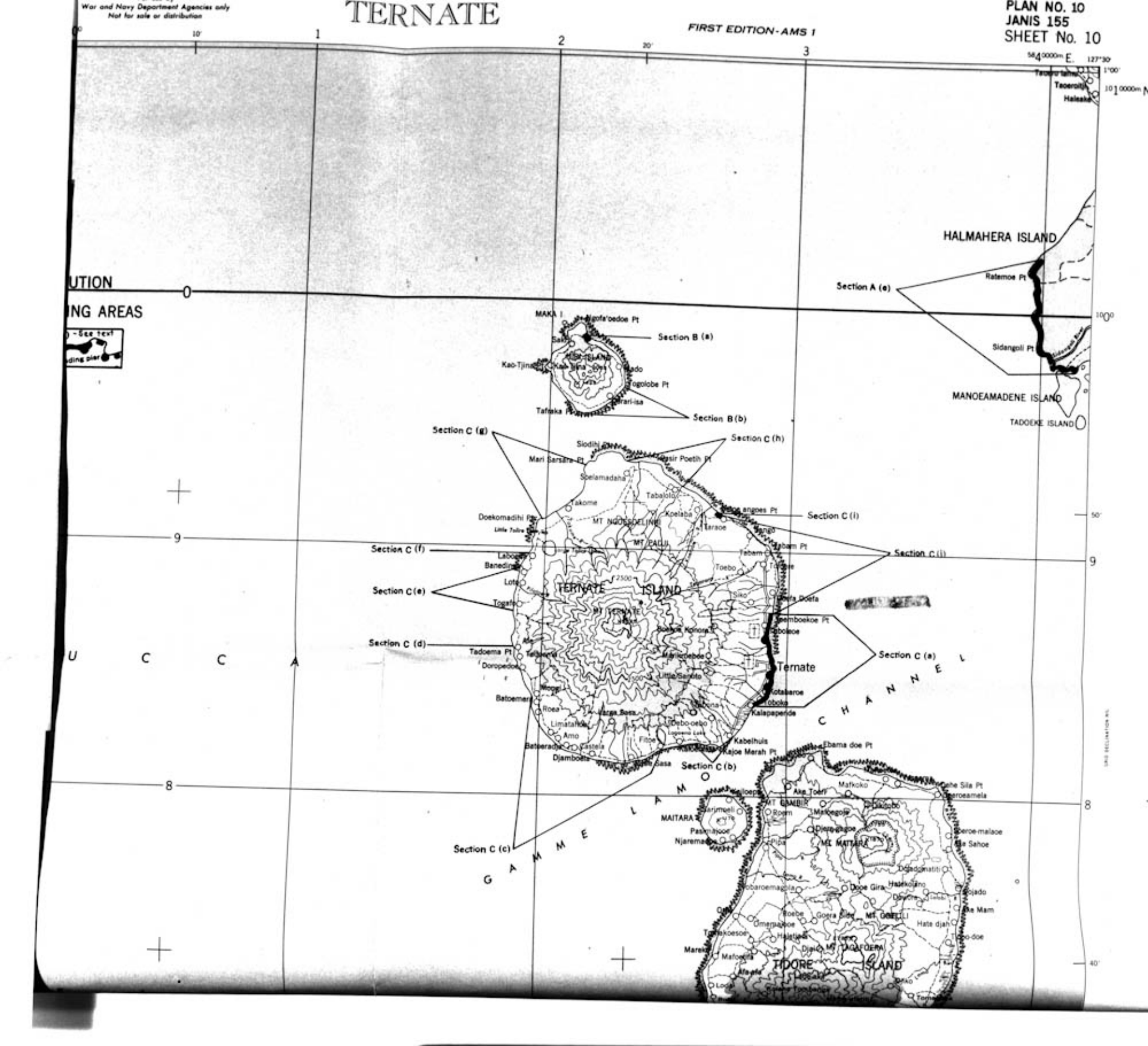
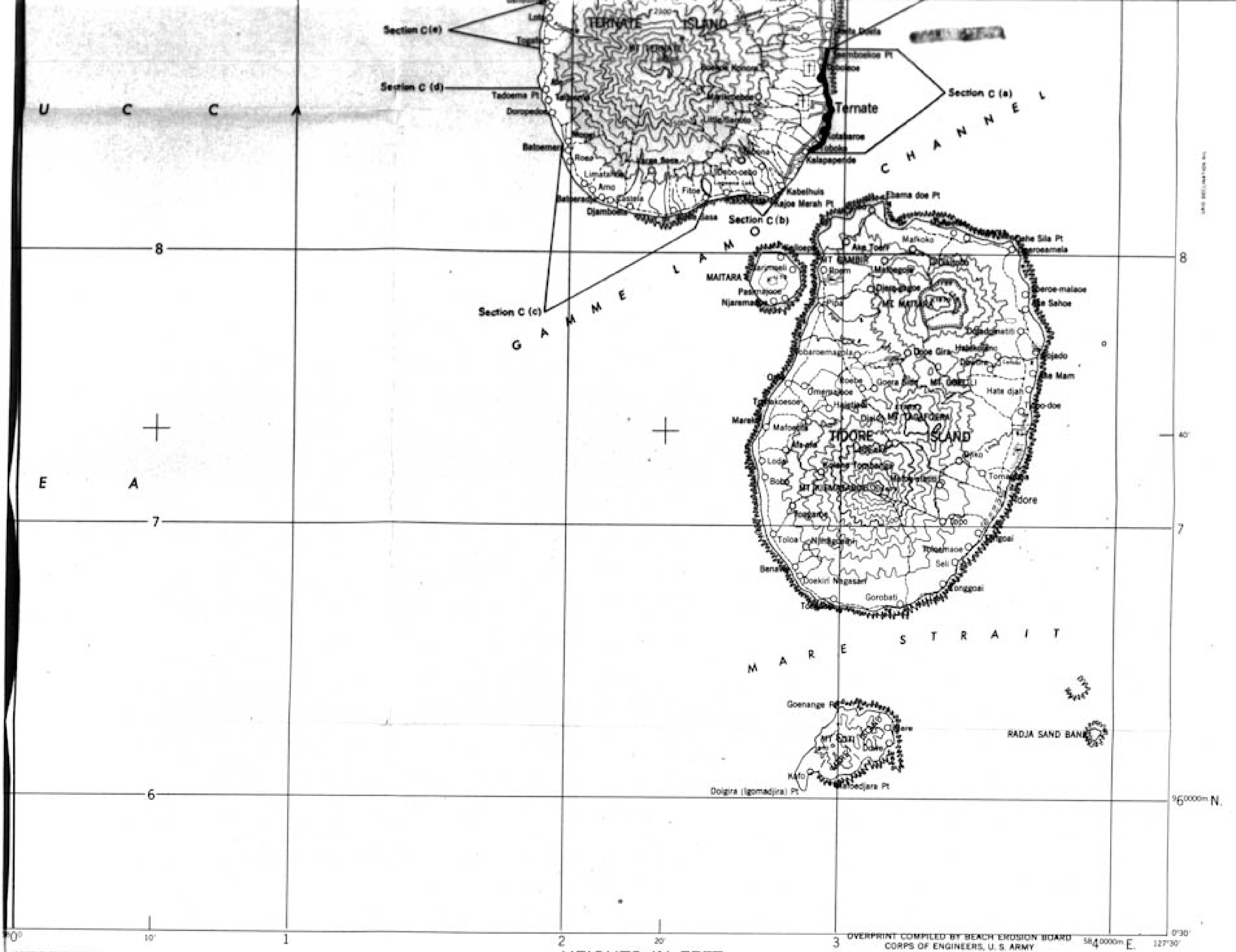
TERNATE

FIRST EDITION-AMS 1

PLAN NO. 10
JANIS 155
SHEET No. 10





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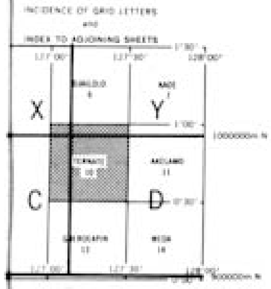
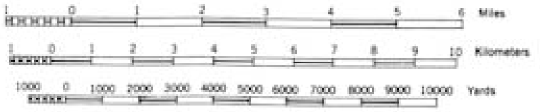
ARMY MAP SERVICE U. S. ARMY, WASHINGTON D. C.
1943



SCALE 1:125,000

HEIGHTS IN FEET



CONTOUR INTERVAL 500 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 110° East

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 2' INCREASE
FOR CENTER OF SHEET

TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER. Must be used for this sheet. Obtain from face of map or from diagram.

FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 1600000

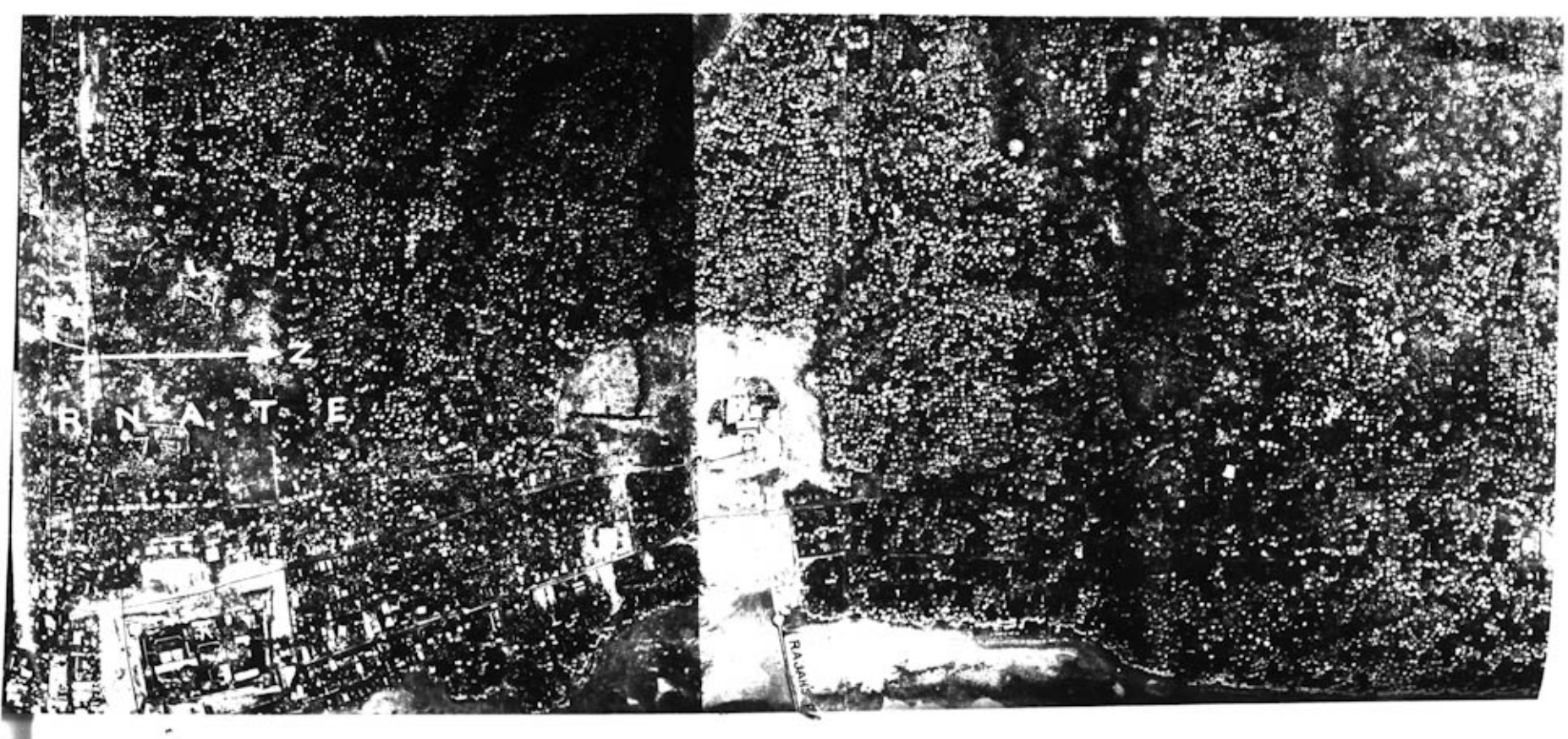
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, Viz. 6

POINT MAREKO		LETTERS	
East Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. *Estimate tenths Eastwards*	2 7	North Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. *Estimate tenths Northwards*	7 4
East	27	North	74
REFERENCE D2774		To nearest 1,000 metres	

PLAN 11 JANIS No. 155 [redacted]

TOWN OF TERNATE—Aerial mosaic

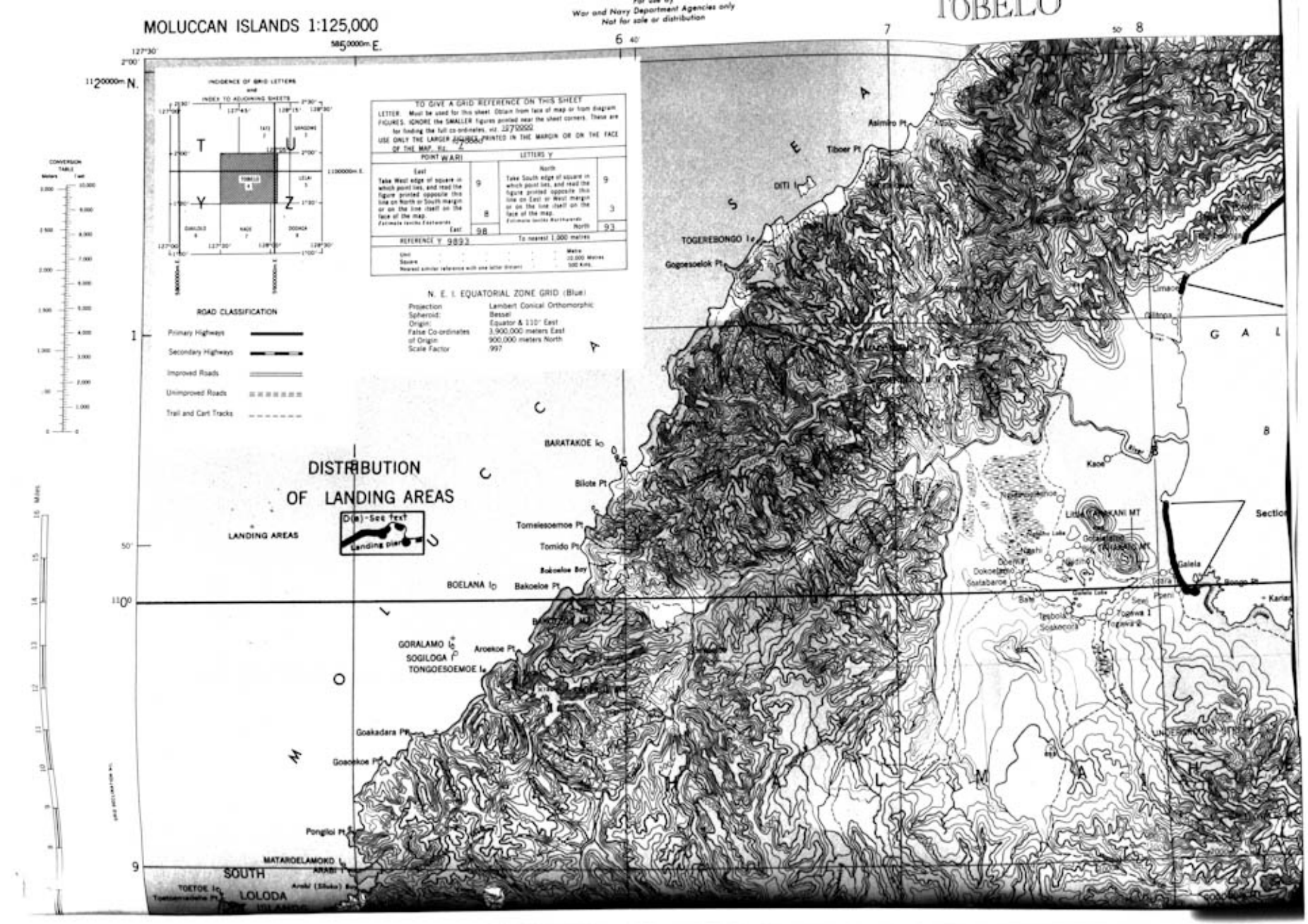
T E

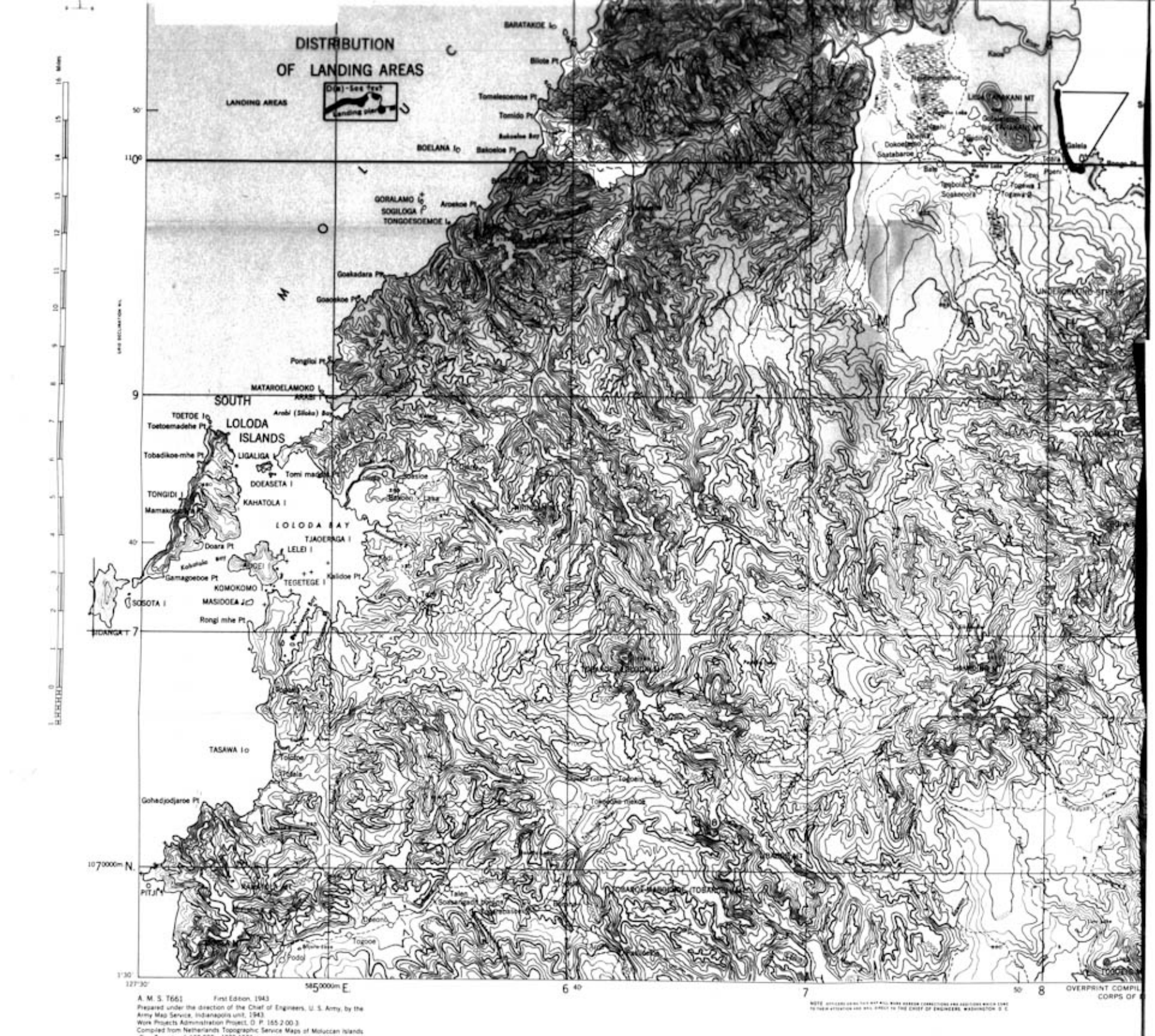

N
E
A
T
E

RAJAH'S PIER
1000 0 1000 FT.

PLAN 12 JANIS No. 155 [redacted]

TOBELO SHEET, HALMAHERA—
Topography and landing areas


MOLUCCAN ISLANDS 1:125,000
For use by War and Navy Department Agencies only Not for sale or distribution
TOBELO
585,000m E.
1120000m N.
INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS
TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 1270000
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz. 70000
POINT W ARI
LETTERS Y
East
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map.
Estimate tenths Eastwards
East 98
North
Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map.
Estimate tenths Northwards
North 93
REFERENCE Y 9893
To nearest 1,000 metres
Unit — Metre
Square — 10,000 Metres
Nearest similar reference with one letter distant — 100 Kms.
N. E. I. EQUATORIAL ZONE GRID (Blue)
Projection Lambert Conical Orthomorphic
Spheroid: Bessel
Origin: Equator & 110° East
False Co-ordinates of Origin 3,900,000 meters East 900,000 meters North
Scale Factor 997
ROAD CLASSIFICATION
Primary Highways
Secondary Highways
Improved Roads
Unimproved Roads
Trail and Cart Tracks
CONVERSION TABLE
DISTRIBUTION OF LANDING AREAS
LANDING AREAS
D(a)-See text
Landing place
SEA
MOLUCCA
GALELA
Asimiro Pt
Tiboer Pt
DITI I.
TOGEREBONGO I.
Gogoesoelok Pt
BARATAKOE I.
Biloti Pt
Tomelesoemoe Pt
Tomido Pt
Bakoelee Bay
BOELANA I.
Bakoelee Pt
GORALAMO I.
SOGILOGA I.
TONGOESOEMOE I.
Aroekoe Pt
Goakadara Pt
Goaoekoe Pt
Ponglioi Pt
MATAROELAMOKO I.
ARABI I.
TOETOR I.
SOUTH LOLODA ISLANDS
Limaco
Gilitoga
Kaoe River
Lidja Tjokkani MT
Gotalamo MT
Tjokkani MT
Dokoelamo
Soatabarae
Sabi
Tjobolo
Soakocora
Topeva 1
Topeva 2
Poeri
Galela
Bongo Pt
Karian
Section



A. M. S. T661 First Edition, 1943
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1943.
Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service Maps of Moluccan Islands

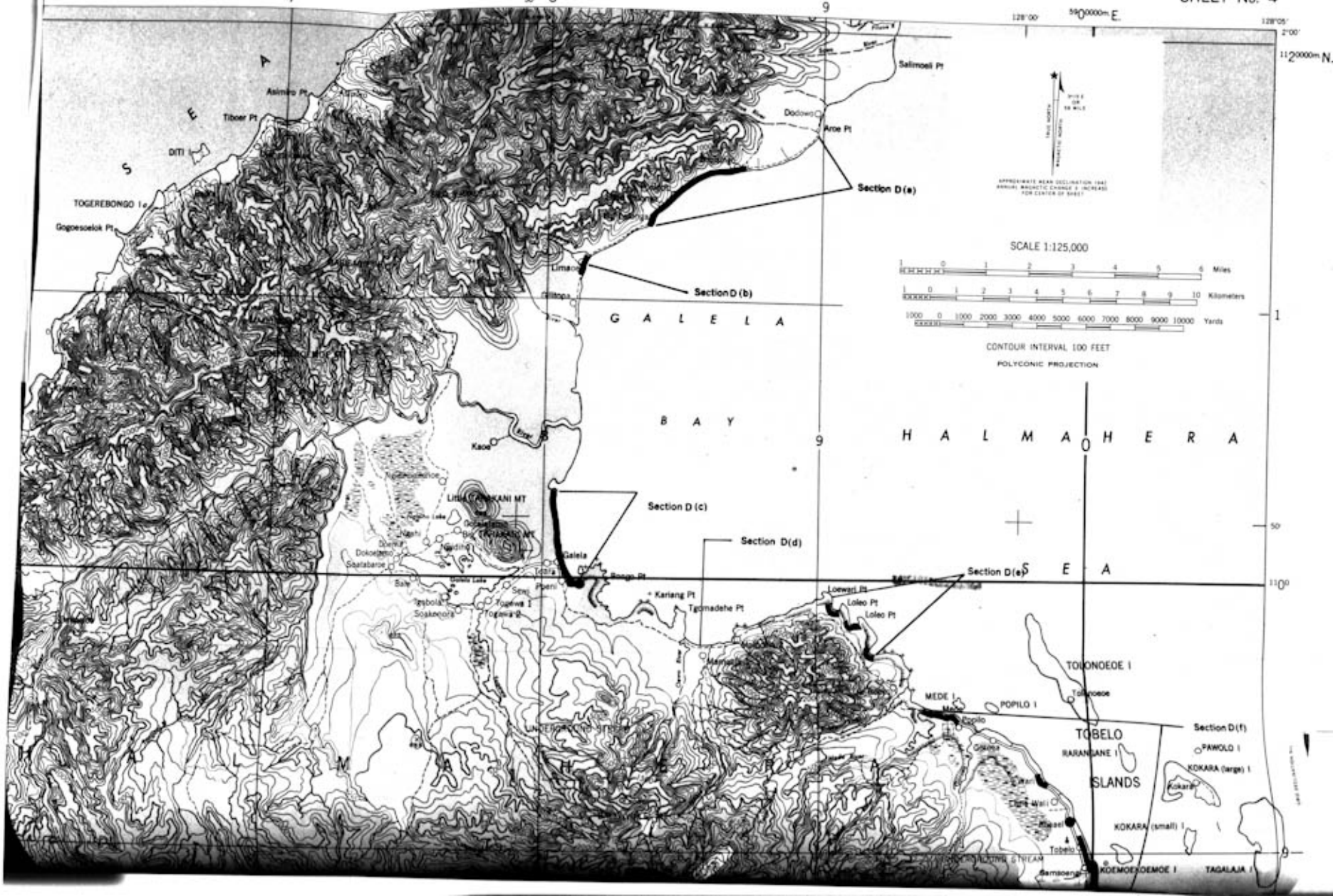
NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

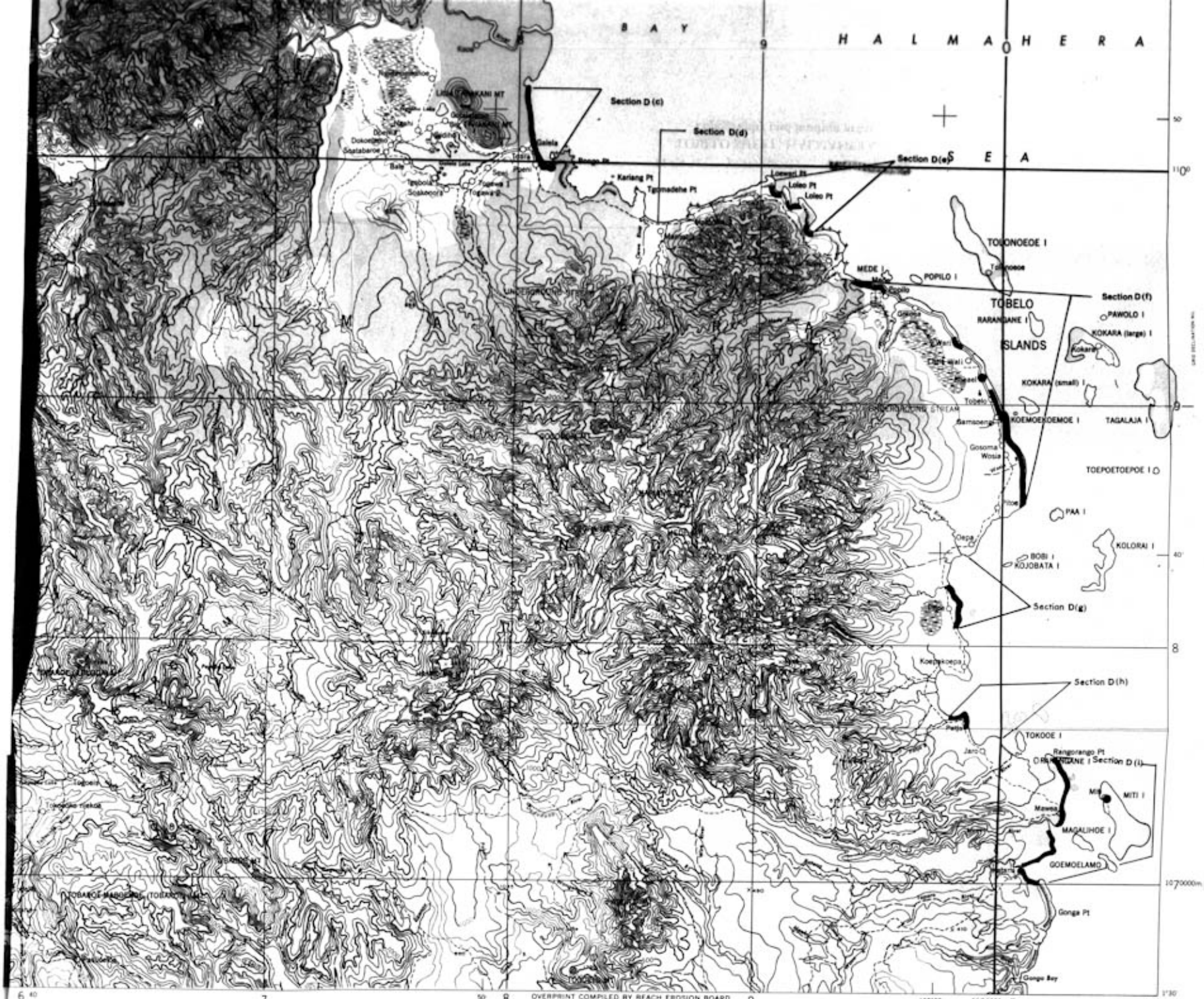
TOBELO

PLAN NO. 12
LANIS 155

FIRST EDITION-AMS 1

SHEET No. 4





NOTE: USERS OF THIS MAP WILL MARK ERRORS, CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D.C.

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U.S. ARMY

HEIGHTS IN FEET

ARMY MAP SERVICE, U.S. ARMY, WASHINGTON, D.C.

No. 4 TOBELO
N130-E12730/30x35

MOLUCCAN ISLANDS 1:125,000

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War and Navy Department Agencies only
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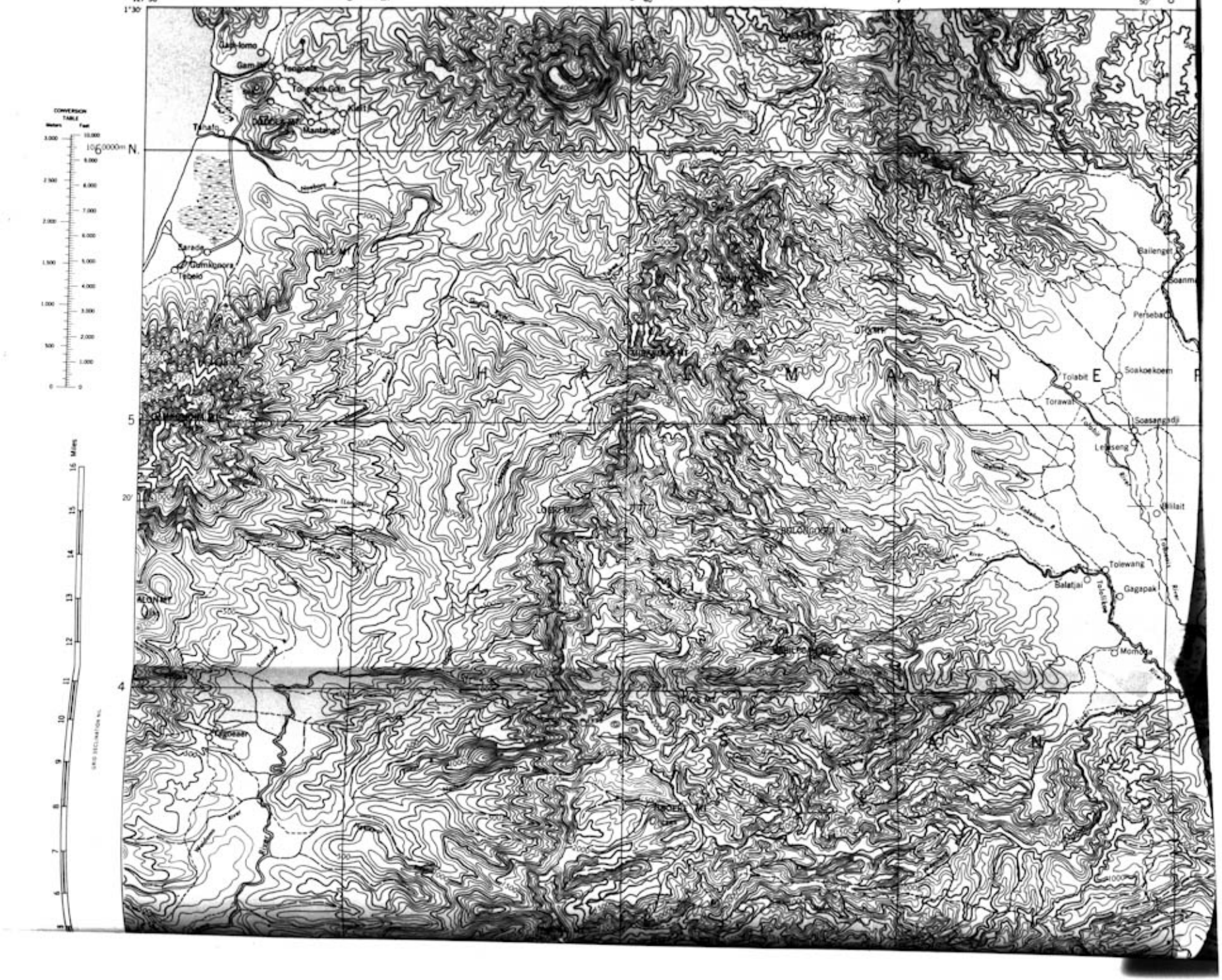
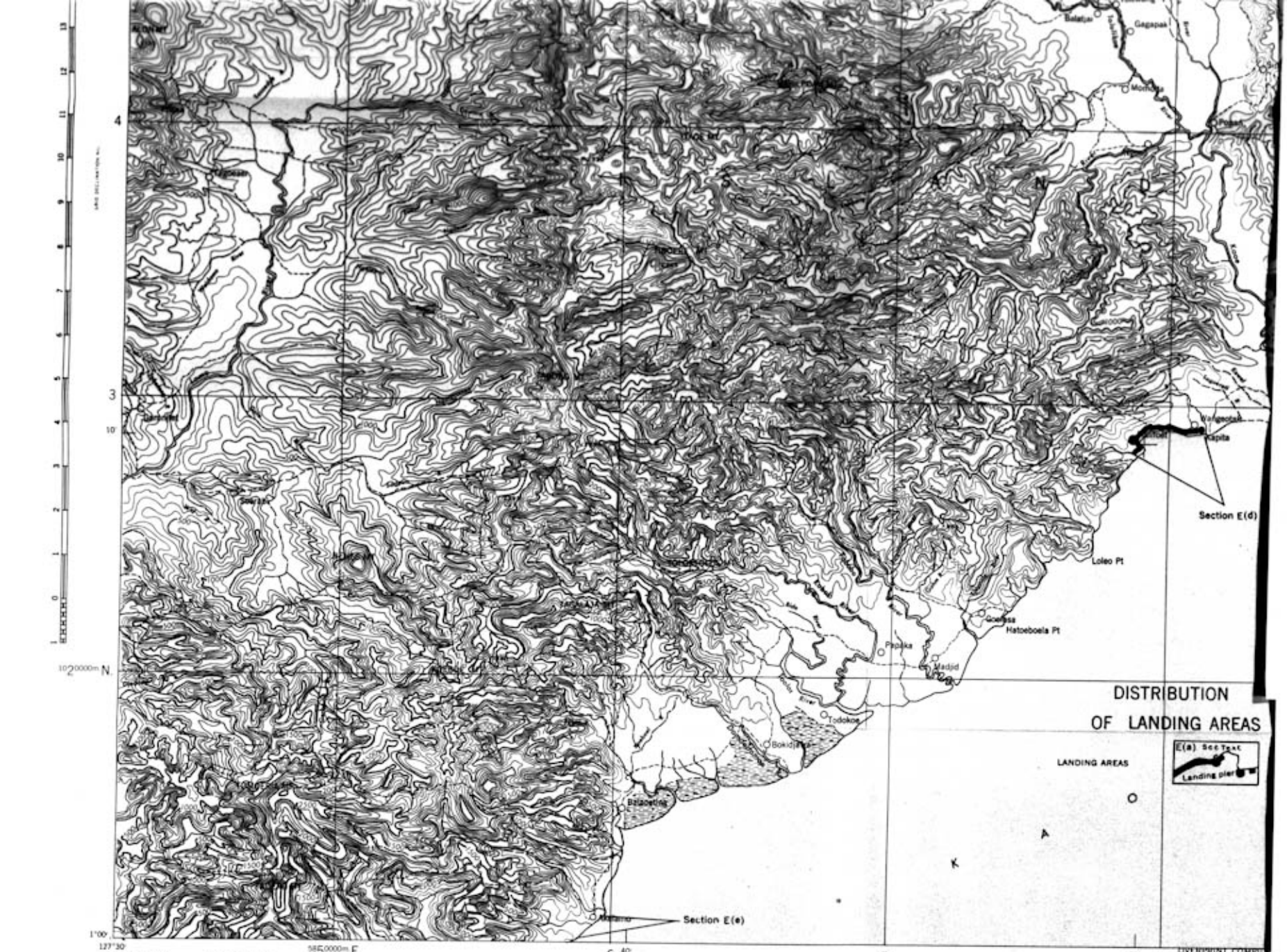
KAOE





A. M. S. T661 First Edition 1943

Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1943.

Work Projects Administration Project, O. P. 165-2-00-3.

Compiled from Netherlands Topographic Service Maps of Moluccan islands, (Res. Ternate), 1:100,000 (1925, 1926).

ROAD CLASSIFICATION

Primary Highways

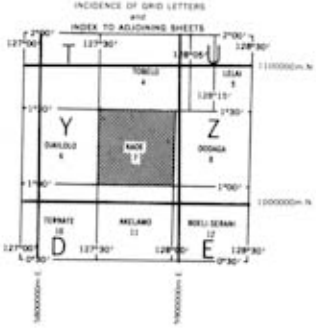
Secondary Highways

Improved Roads

Unimproved Roads

Trails and Cart Tracks

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS



SCALE 1:125,000

1 0 1 2 3 4 5 6 Miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 Yards

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 100° East
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North
Scale Factor	.997

NOTE: OFFICERS USING THIS MAP WILL MAKE GRID-MAGNETIC CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND WILL REPORT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

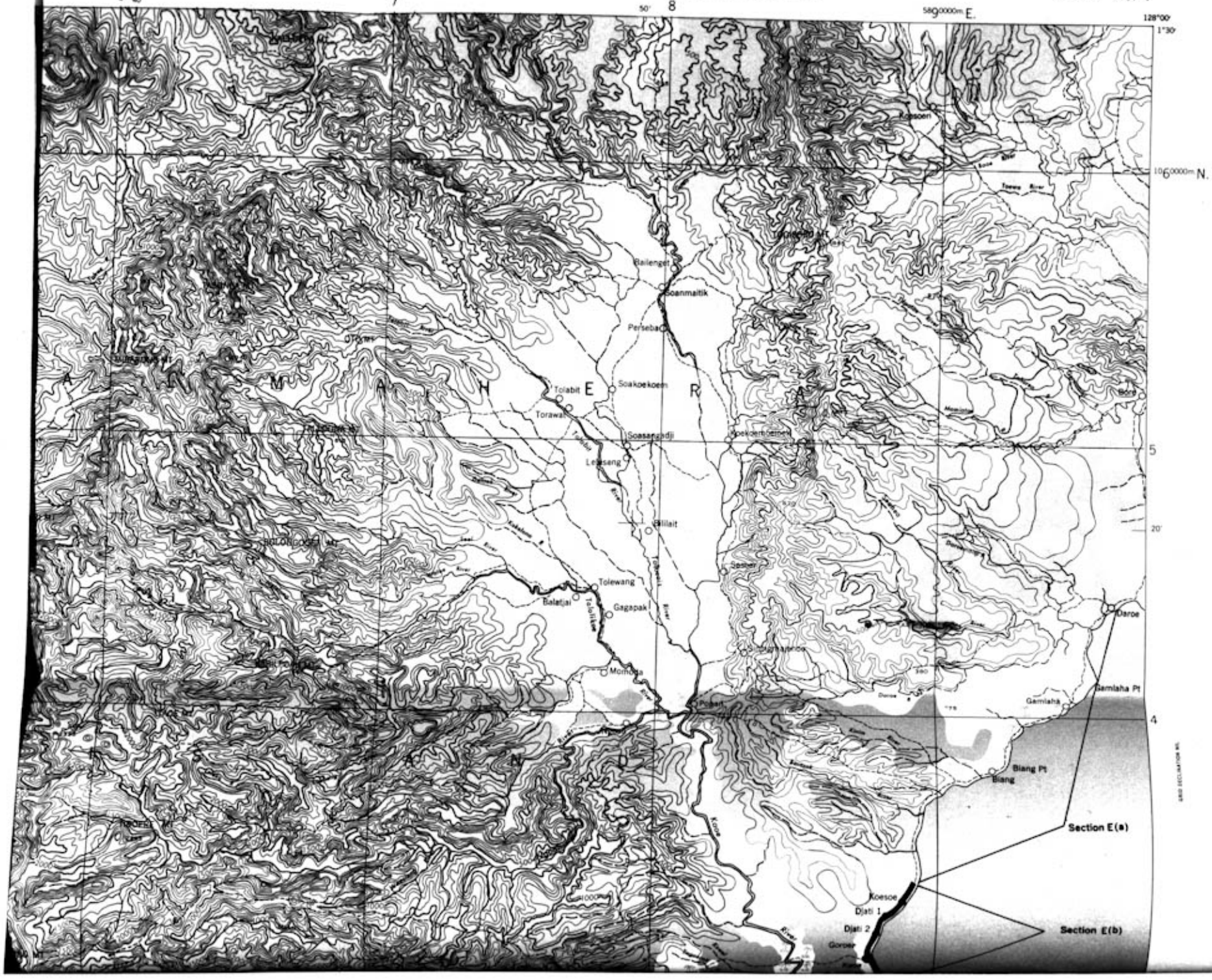
HEIGHTS IN FEET

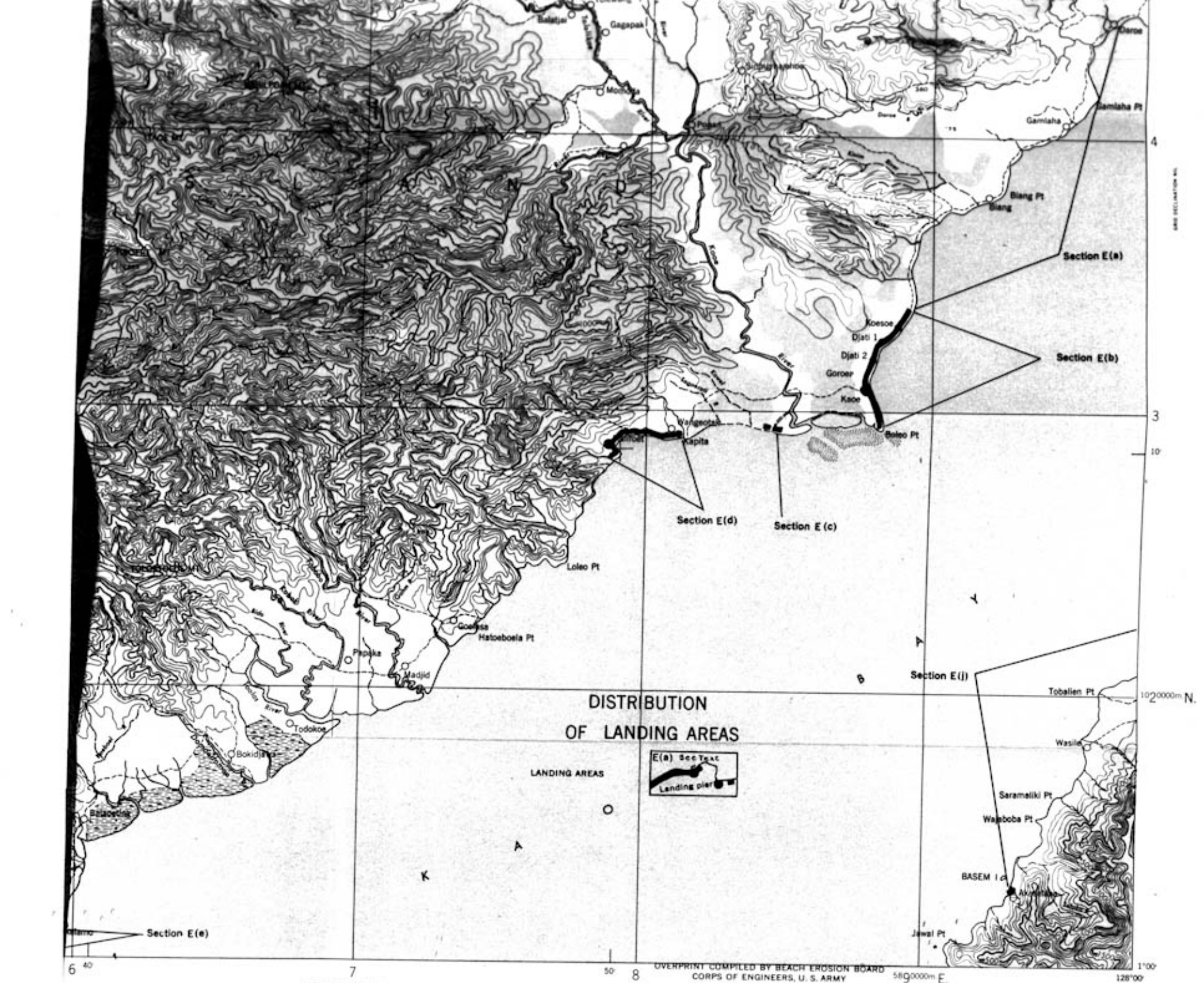
OVERPRINT COMPIL
CORPS OF

KAOE

FIRST EDITION - AMS 1

JANIS 155
SHEET No. 7




Section E(a)
Section E(b)
Section E(c)
Section E(d)
Section E(e)
Section E(j)
Biang Pt
Biang
Boleo Pt
Kapita
Loleo Pt
Hatoeboela Pt
Tobalien Pt
Wasile
Saramaliki Pt
Waeboba Pt
Jawal Pt
Gamlaha Pt
Gamlaha
Koesoe
Djati 1
Djati 2
Goroer
Kaoe
Gagapak
Batatjan
Dorse
Pasker
Madjid
Todokoe
Bokidjira
Belaoeling
Akelamo
BASEM I.
DISTRIBUTION
OF LANDING AREAS
LANDING AREAS
E(a) Section
Landing pier
SCALE 1:125,000
CONTOUR INTERVAL 100 FEET
POLYCONIC PROJECTION
N. E. I. EQUATORIAL ZONE GRID (Blue)
Projection: Lambert Conical Orthomorphic
Spheroid: Bessel
Origin: Equator & 100° East
False Co-ordinates of Origin: 3,900,000 meters East, 900,000 meters North
Scale Factor: .997
Miles
Kilometers
Yards
HEIGHTS IN FEET
OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY
ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 1943
TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 1222220
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP. Viz. 1020000
POINT SASOER LETTERS Y
East: Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. 8 2 — East 82
North: Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. 4 5 — North 45
REFERENCE Y8245 To nearest 1,000 metres
Unit — Metre
Square — 10,000 Metres
Nearest similar reference with one letter distant — 500 Kms
No. 7 KAOE

as been

PLAN 14 JANIS No. 155 [redacted]

DODAGA SHEET, HALMAHERA—
Topography and landing areas

MOLUCCAN ISLANDS 1:125,000

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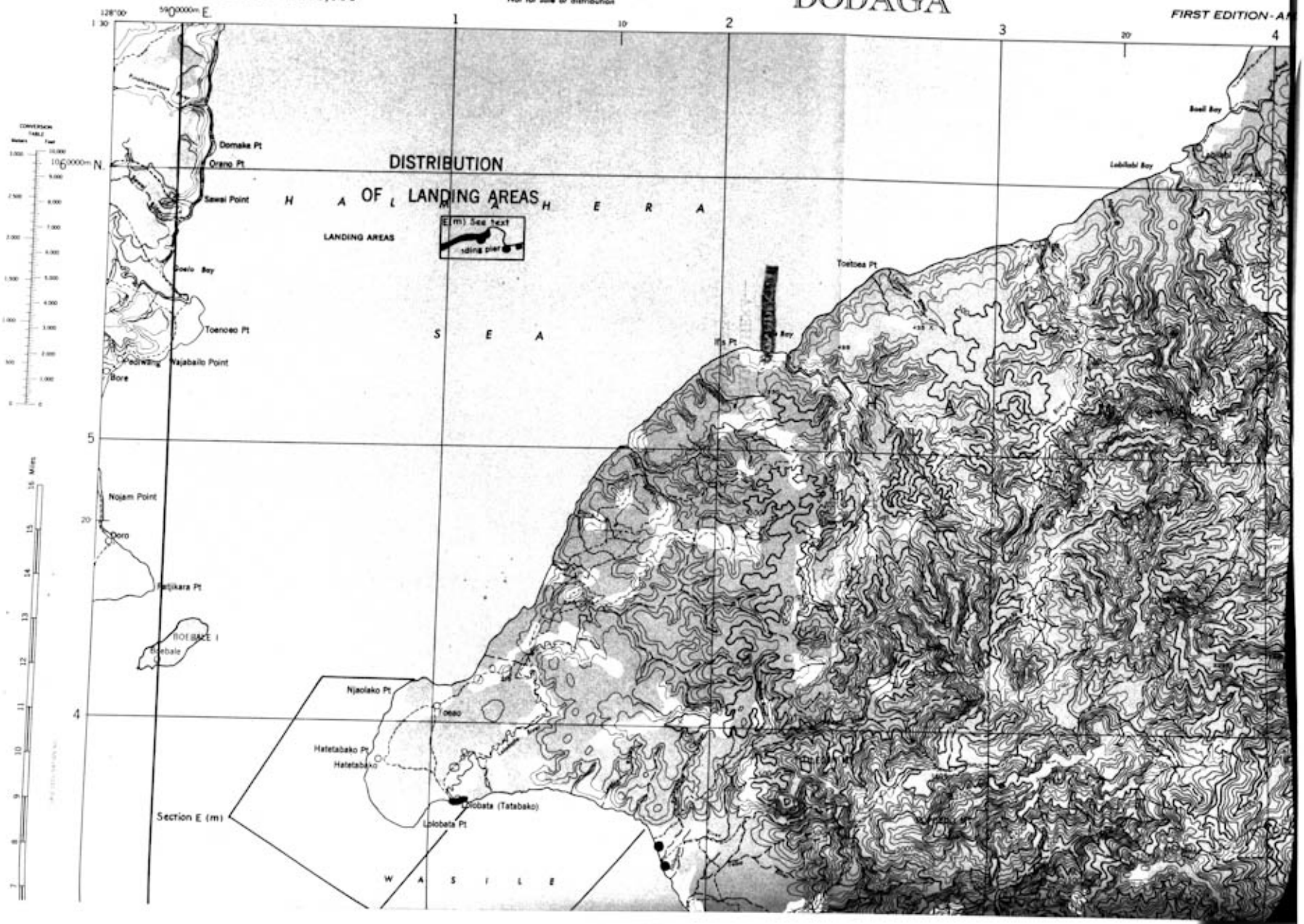
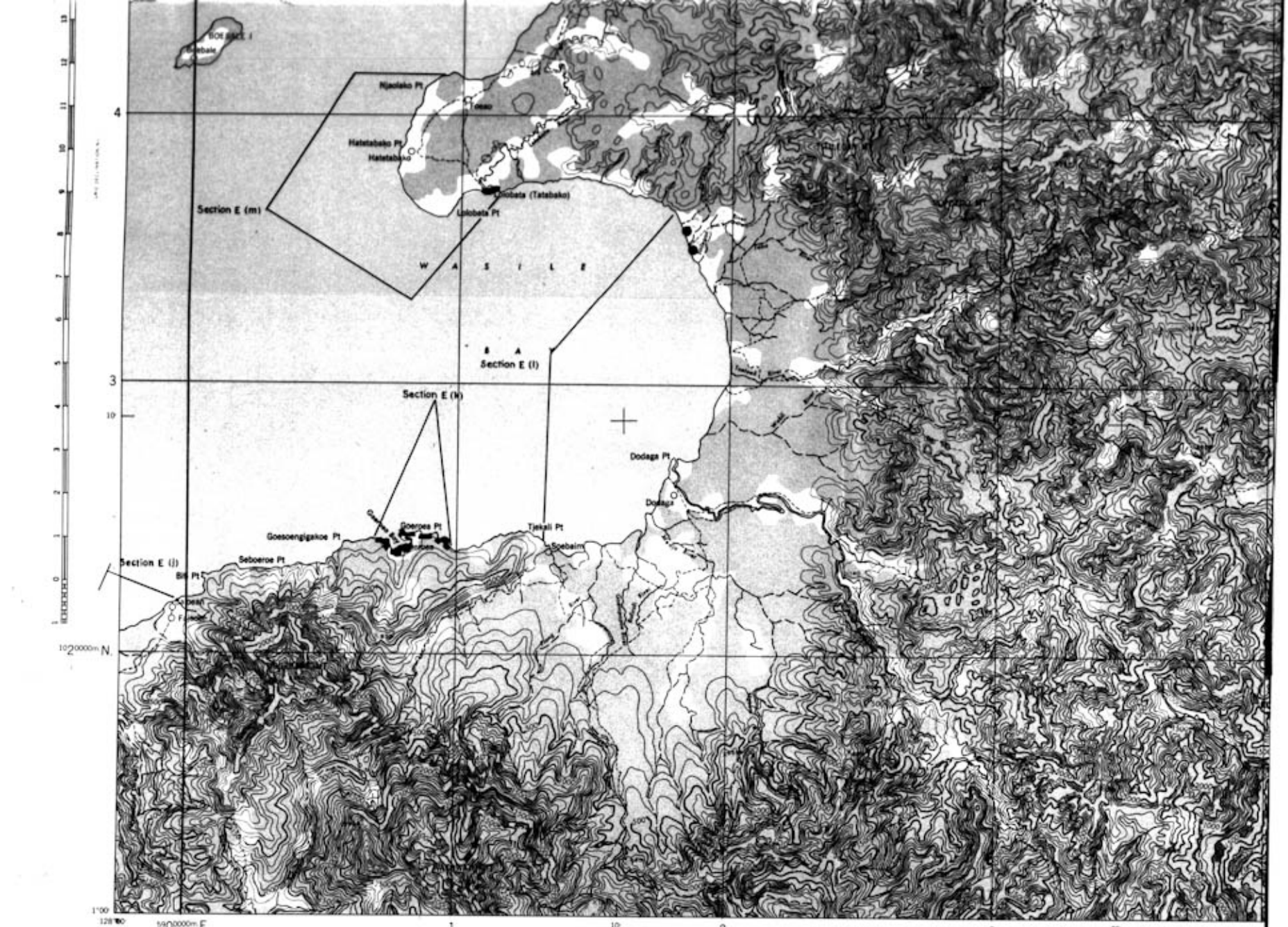
DODAGA

FIRST EDITION - A



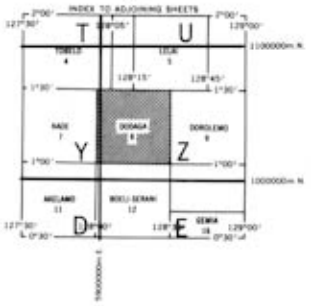


A. M. S. T661 1st Edition. 1943
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1943
Work Projects Administration Project, O. P. 165-2-00.3
Compiled from Netherlands Topographic Service maps of Moluccan Islands, (Res. Ternate), 1:100,000, (1925, 1926)

ROAD CLASSIFICATION

Primary Highways
Secondary Highways
Improved Roads
Unimproved Roads
Trail and Cart Tracks

INCIDENCE OF GRID LETTERS
and
INDEX TO ADJOINING SHEETS



SCALE 1:125,000

Miles
Kilometers
Yards

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 110° East
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North
Scale Factor	.997

NOTE: OFFICERS USING THIS MAP WILL MAKE MINOR CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND WILL SUBMIT THE CHIEF OF ENGINEERS, WASHINGTON D.C.

HEIGHTS IN FEET

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE
FOR CENTER OF SHEET

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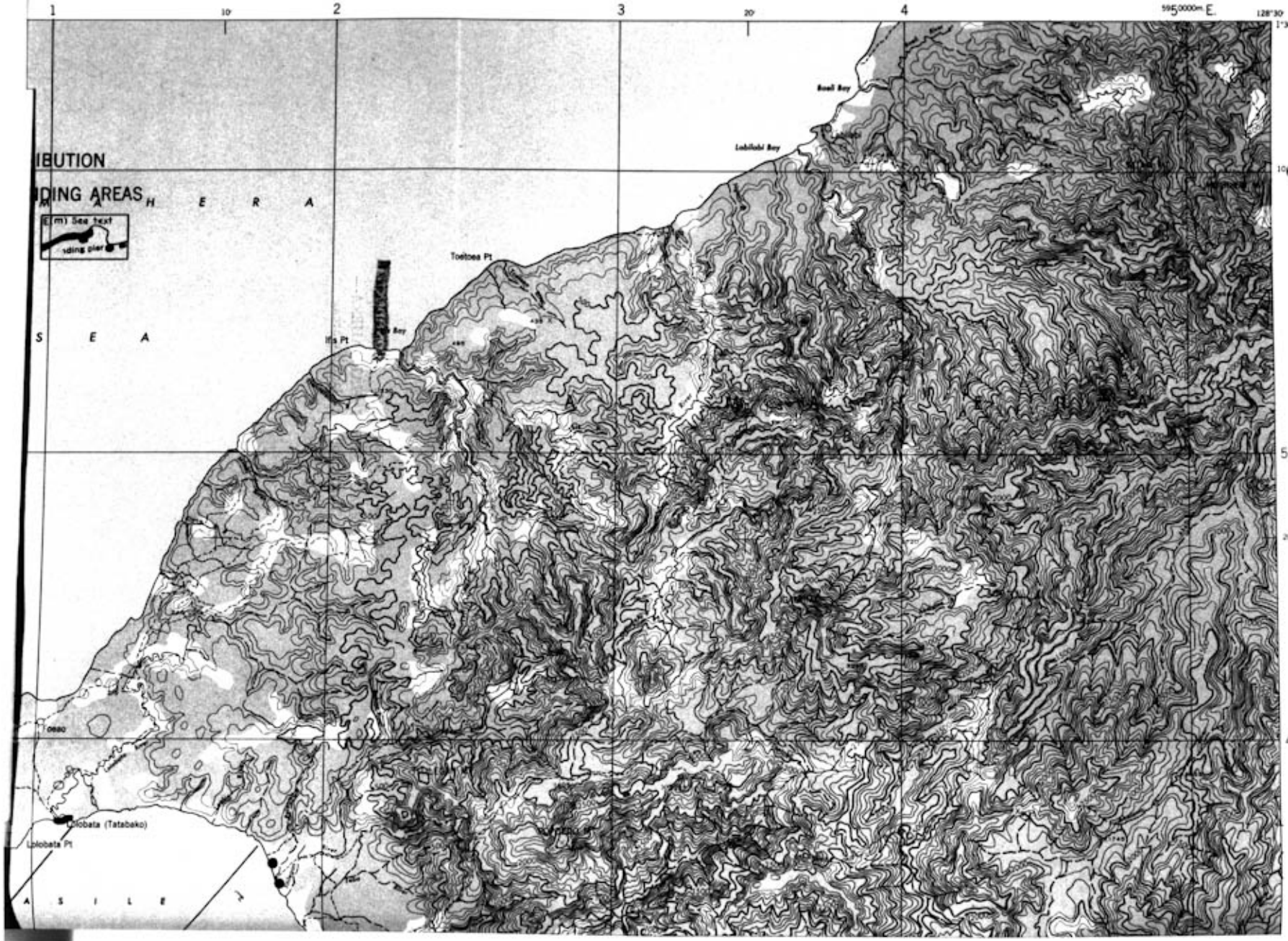
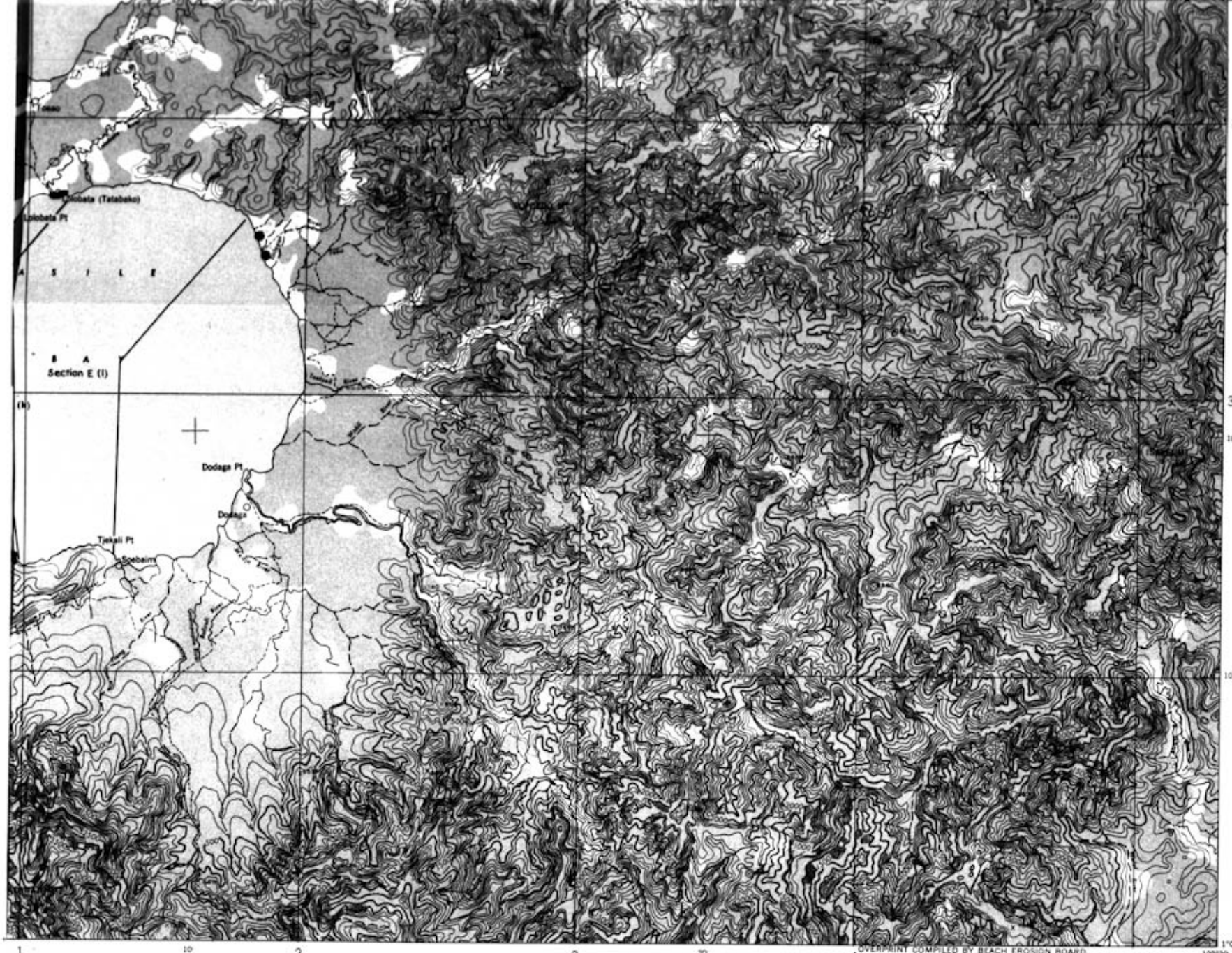
DODAGA

FIRST EDITION - AMS 1

JANIS 155
SHEET No. 8





OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U.S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 1944

SCALE 1:125,000

HEIGHTS IN FEET

Miles

Kilometers

Yards

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

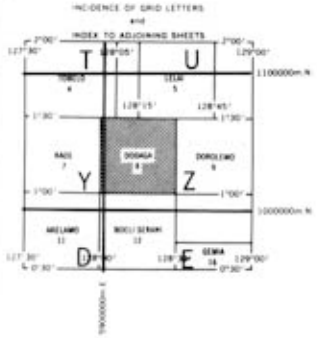
N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 110° East
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North
Scale Factor	.997

NOTE: OFFICERS USING THIS MAP WILL MAKE HEIGHT CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND WILL SUBMIT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE
FOR CENTER OF SHEET

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS



TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 102/2020
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz 1020000

POINT LABILABI — LETTERS Z

East		North	
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. Estimate tenths Eastwards	3 7	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. Estimate tenths Northwards	6 2
East	37	North	62

REFERENCE Z3762 — To nearest 1,000 metres

Unit	Metre
Square	10,000 Metres
Nearest similar reference with one letter distant	500 Kms.

No. 8 DODAGA

N100 E12800/30

This oversized item has been
filmed in sections

PLAN 15 JANIS No. 155 [redacted]

MOROTAI—Landing areas and mangrove. NHO 386

Prijs f. 2.25

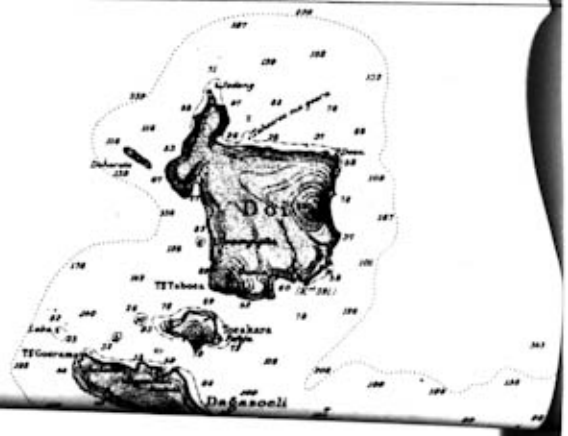
NOORD HALMAHERA
EN
MOROTAI

1:200.000

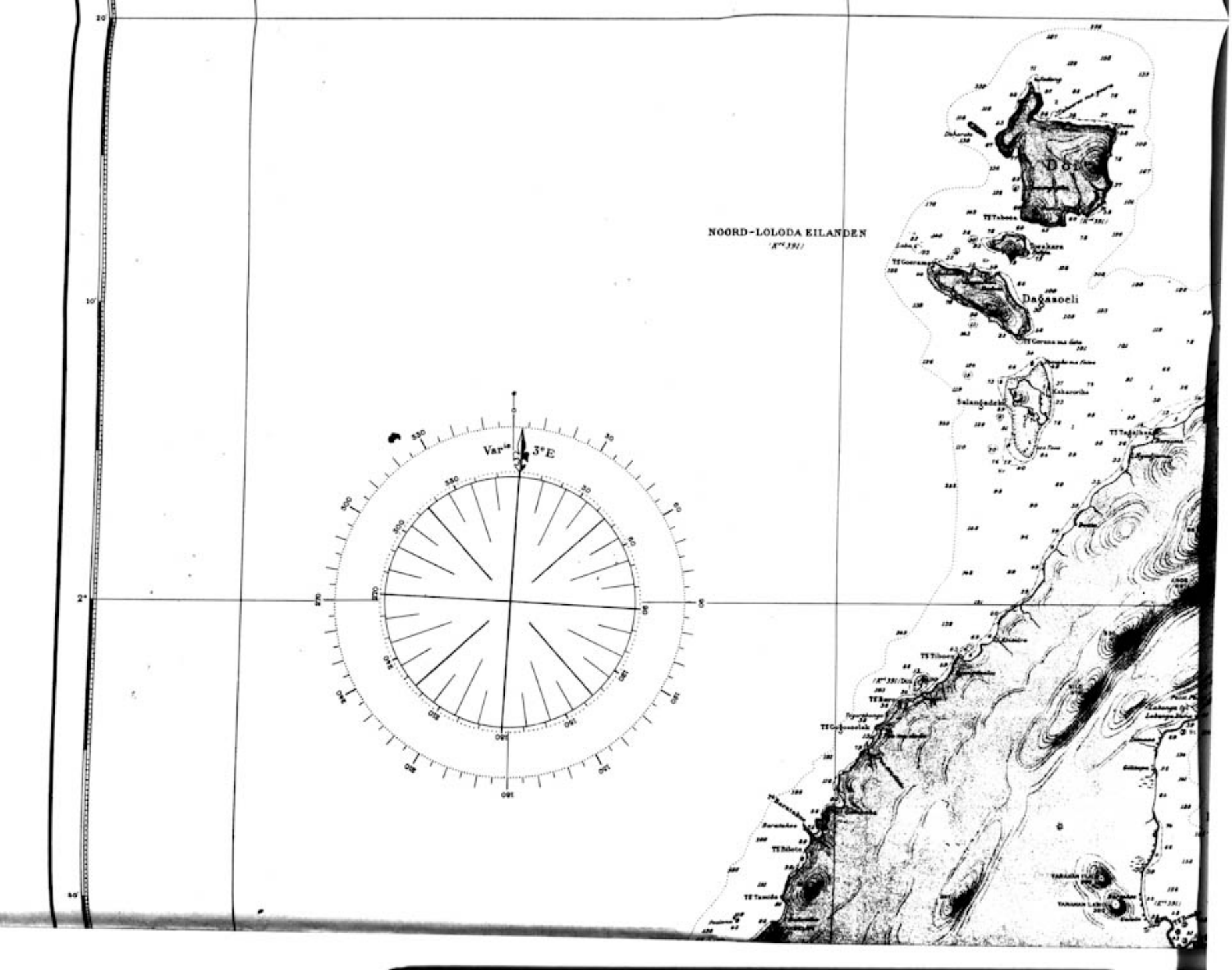
H.M.'s Opnemingsvaartuigen „Van Doorn" 1920 en „Van Gogh" 1922-1924.

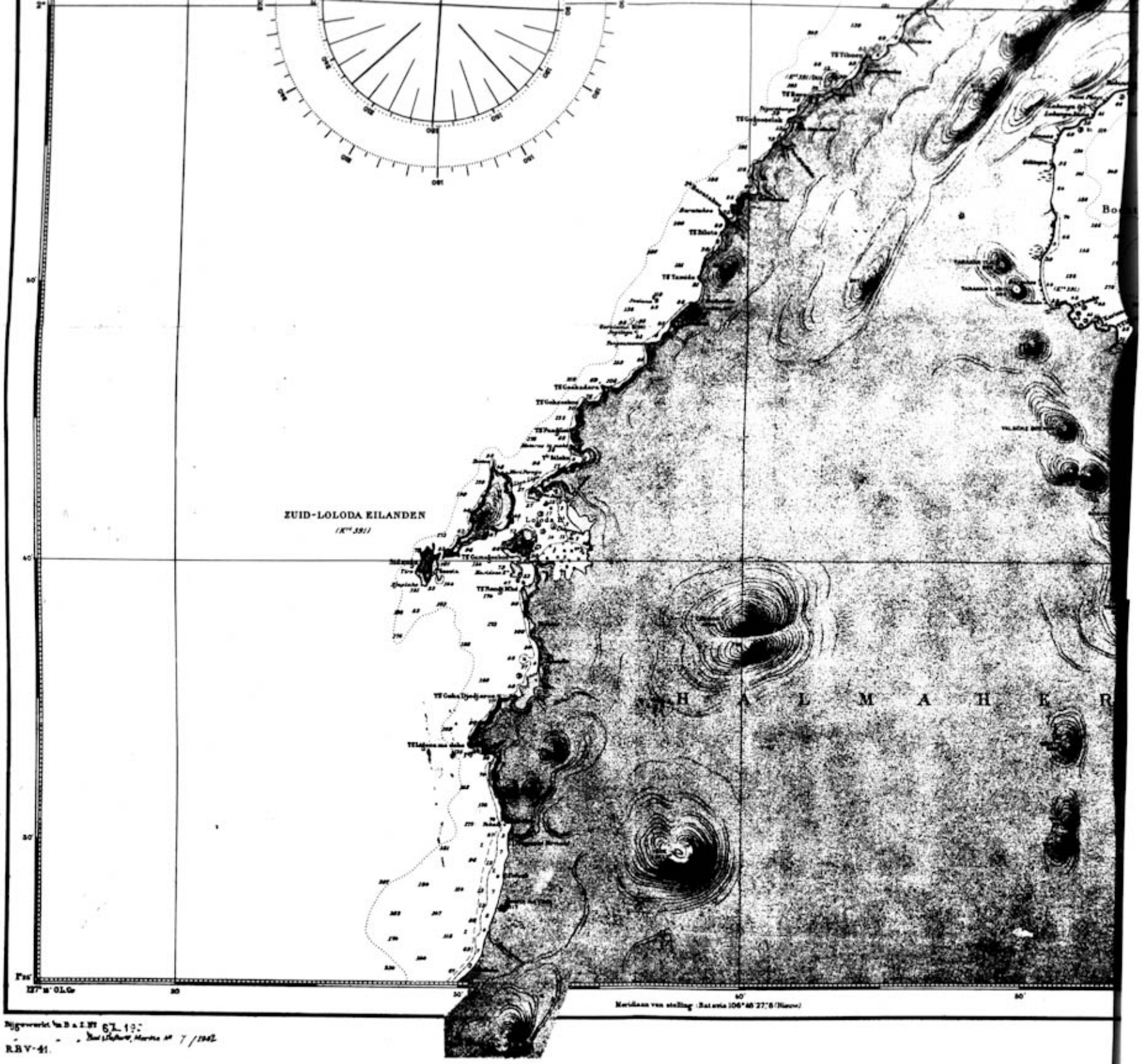
G.d. Grond, h. hard, K. Klei, Kr. Koraal, M. Modder, S. Schelpen, St. Stenen, Z. Zand.

DIEPTEN en BERGHOOGTEN in METERS.
(Diepten herleid tot laagwaterspring 1½ d.M. beneden middenstand.)

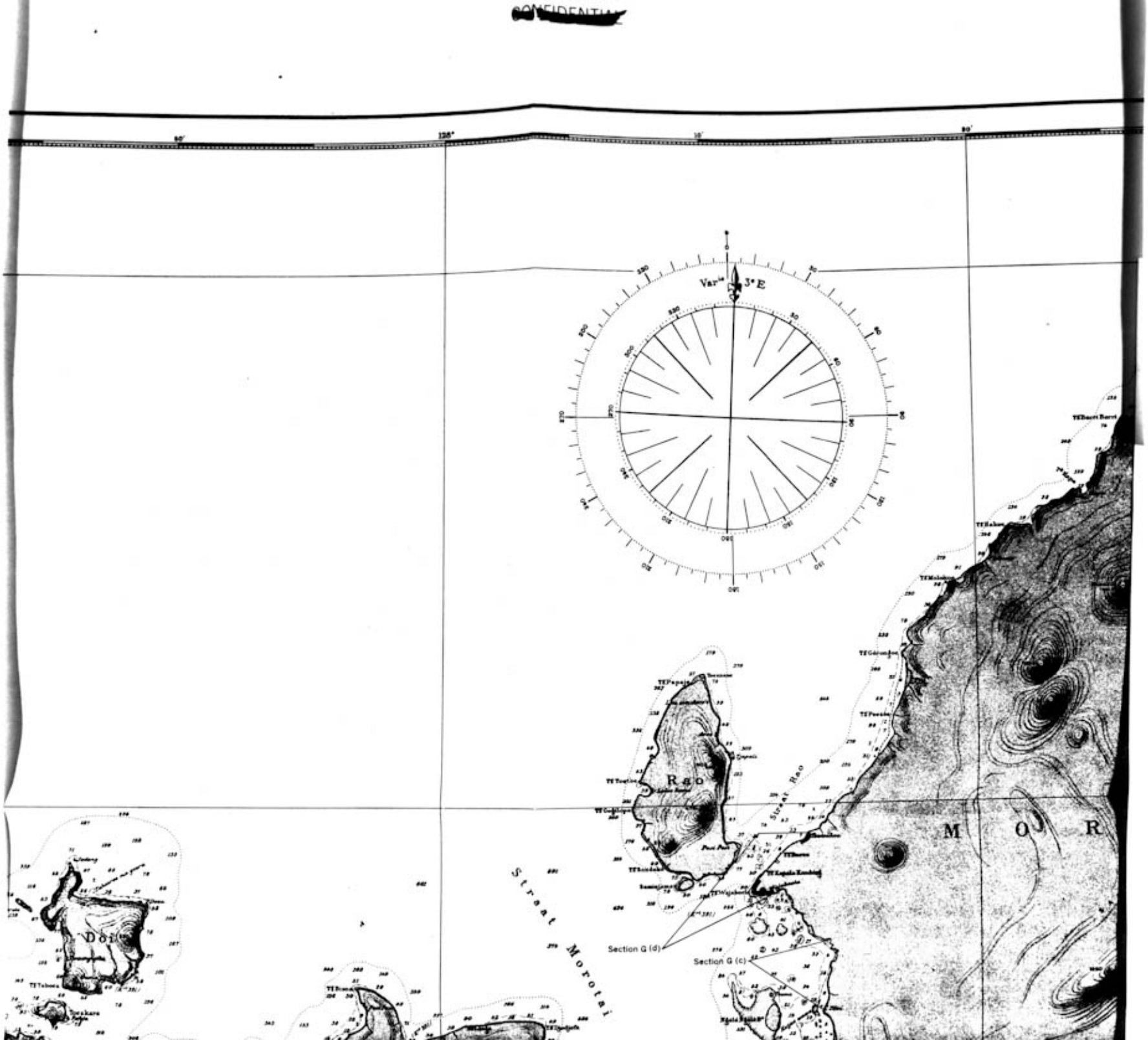


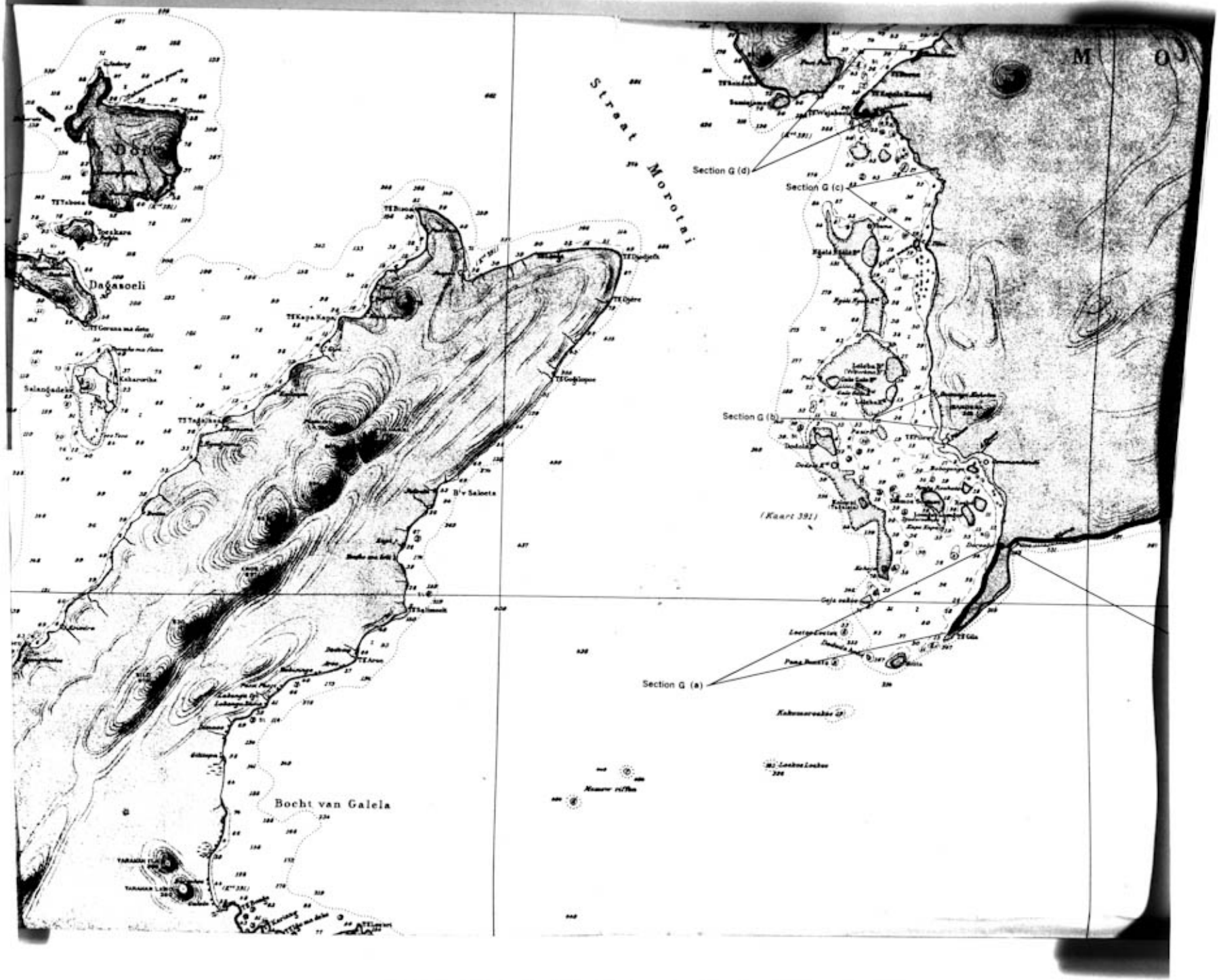
NOORD-LOLODA EILANDEN
(K.v.d.M.)

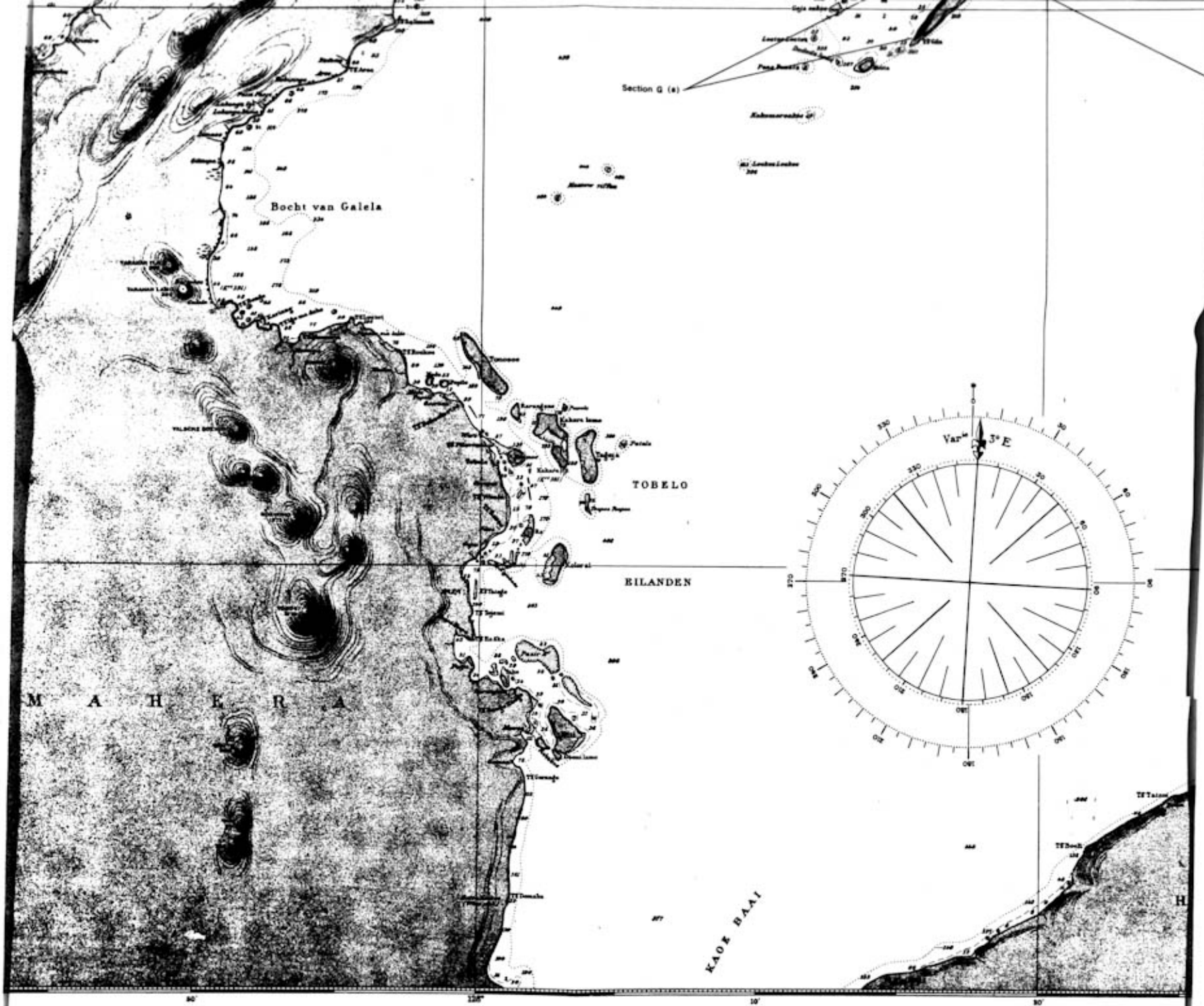

NOORD-LOLODA EILANDEN
(K^te 331)
Dagasoeli
Var^ie 3°E



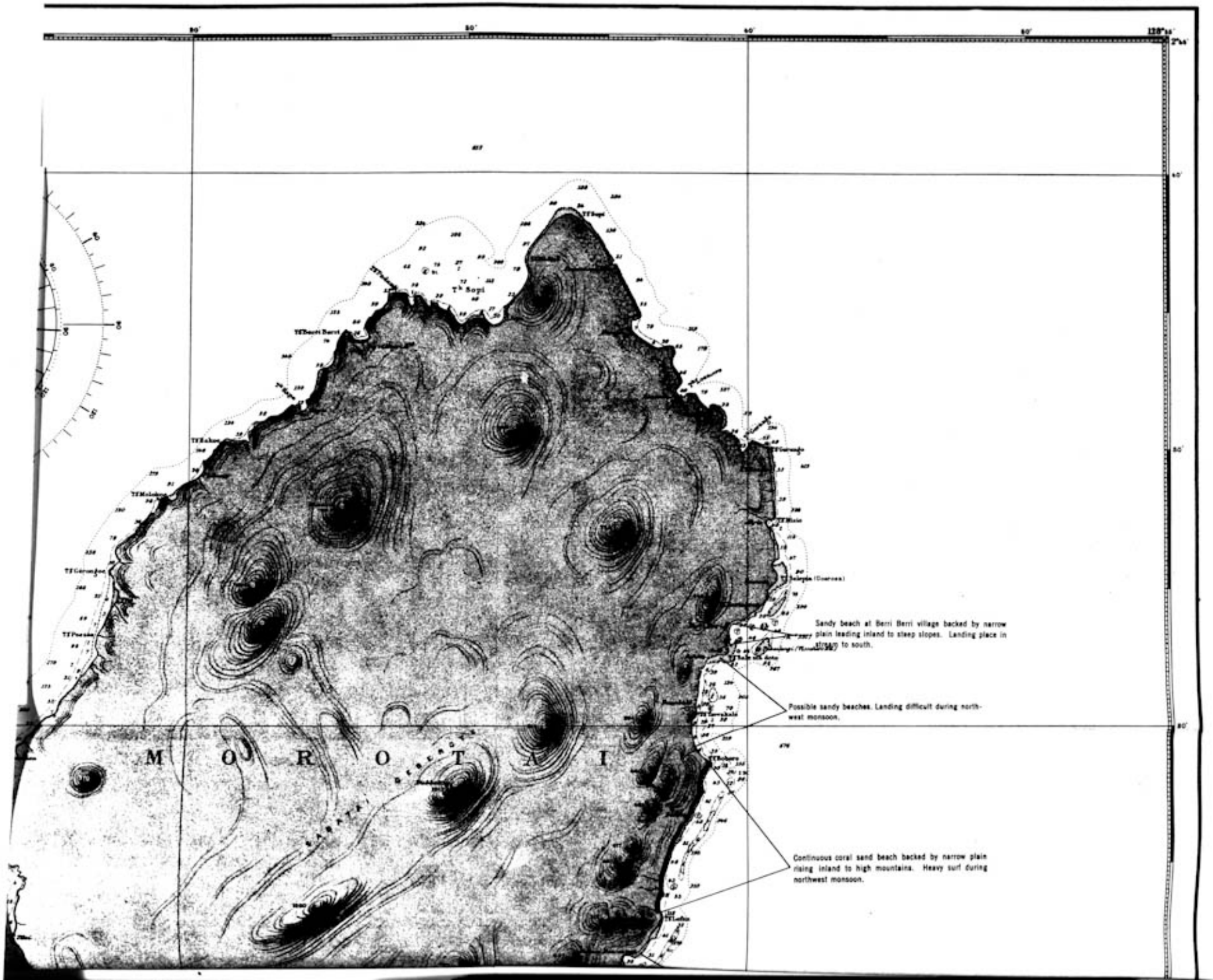
Bijgewerkt tot B. a. I. N° 67 1957
Bad Schaart, Hamburg N° 7 / 1962
R.B.V-41.

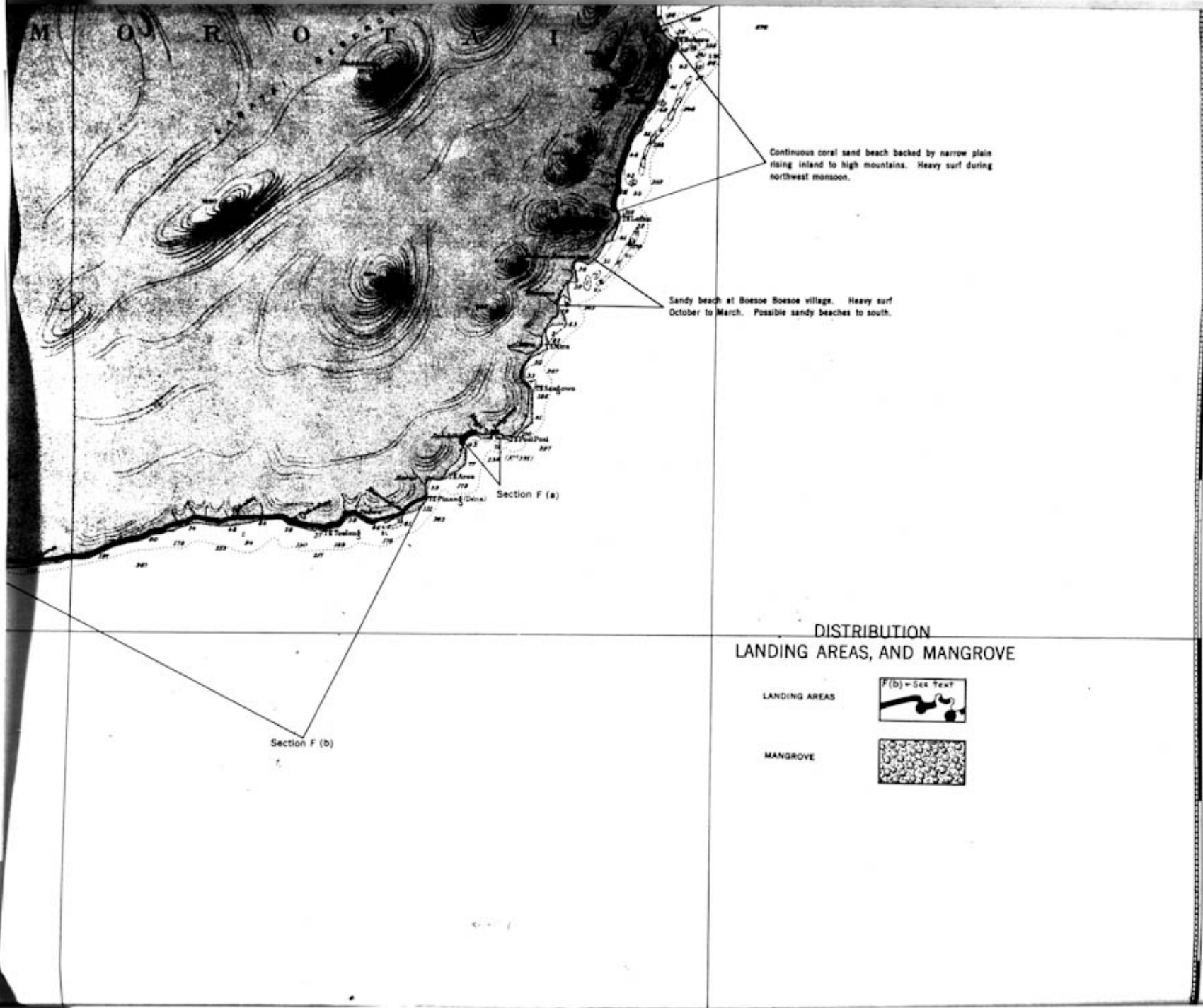

Var^n 3°E
Rao
Selat Rao
Selat Morotai
Section G (d)
Section G (c)
M O R

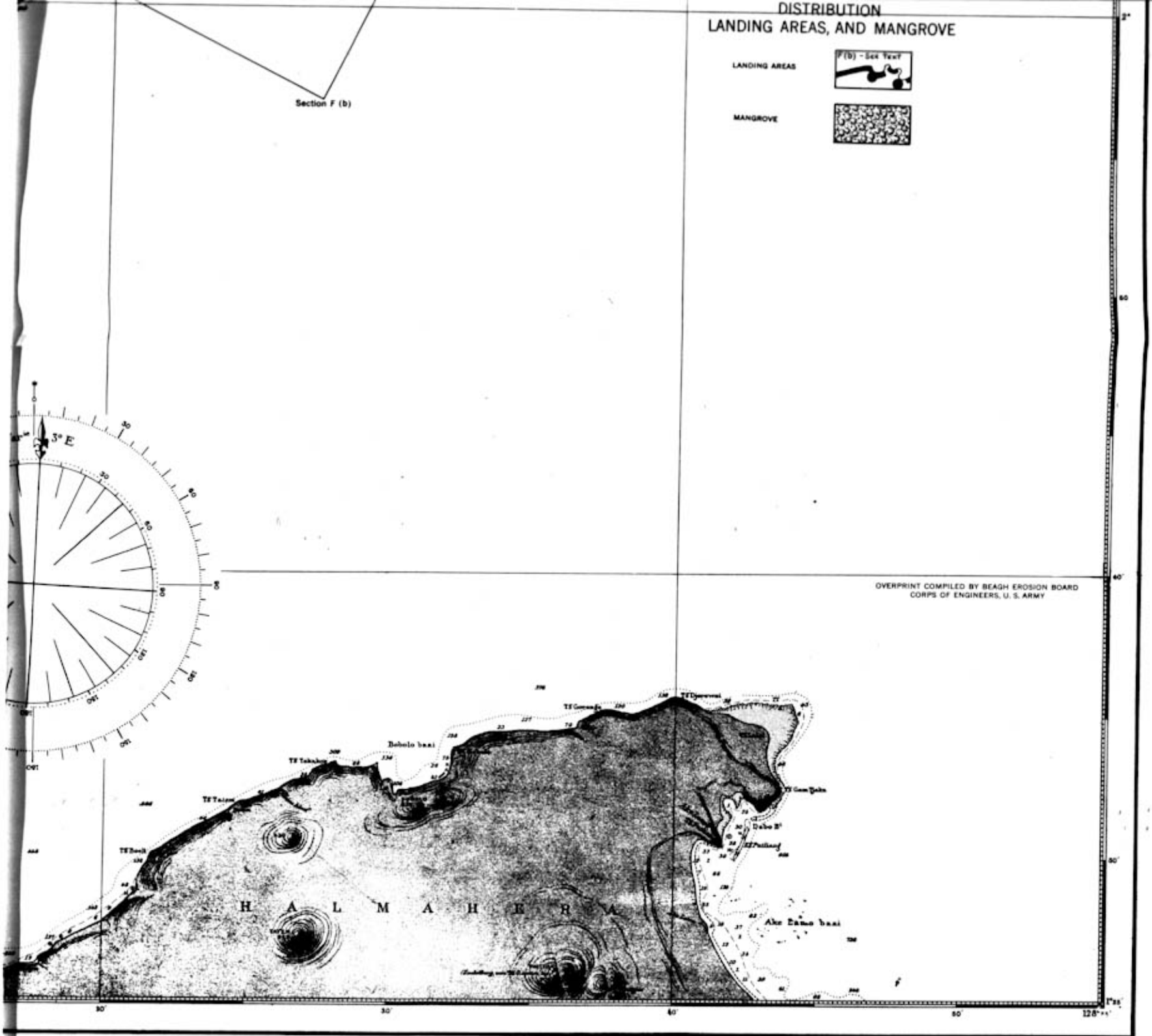

Section G (d)
Section G (c)
Section G (b)
Section G (a)
Strait Mofotai
Dagasoeli
Bocht van Galela
(Kaart 391)



's-Gravenhage. Uitgegeven in Mrt. 1925 door het Ministerie van Marine. Afdeeling Hydrographie.
Verkrijgbaar bij de Gebroeders van Cleef, Spui 58.


M O R O T A I
Sandy beach at Berri Berri village backed by narrow plain leading inland to steep slopes. Landing place in to south.
Possible sandy beaches. Landing difficult during northwest monsoon.
Continuous coral sand beach backed by narrow plain rising inland to high mountains. Heavy surf during northwest monsoon.


M O R O T A I
Continuous coral sand beach backed by narrow plain rising inland to high mountains. Heavy surf during northwest monsoon.
Sandy beach at Boesoe Boesoe village. Heavy surf October to March. Possible sandy beaches to south.
Section F (a)
Section F (b)
DISTRIBUTION
LANDING AREAS, AND MANGROVE
LANDING AREAS
F(b) ← See Text
MANGROVE


DISTRIBUTION
LANDING AREAS, AND MANGROVE
LANDING AREAS
F (b) - See Text
MANGROVE
Section F (b)
3° E
OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY
Bobolo baai
Dabo B°
Ake Bamo baai
H A L M A H E R A

as been

PLAN 16 JANIS No. 155 [redacted]

SANGOWE SHEET, MOROTAI—
Topography and landing areas

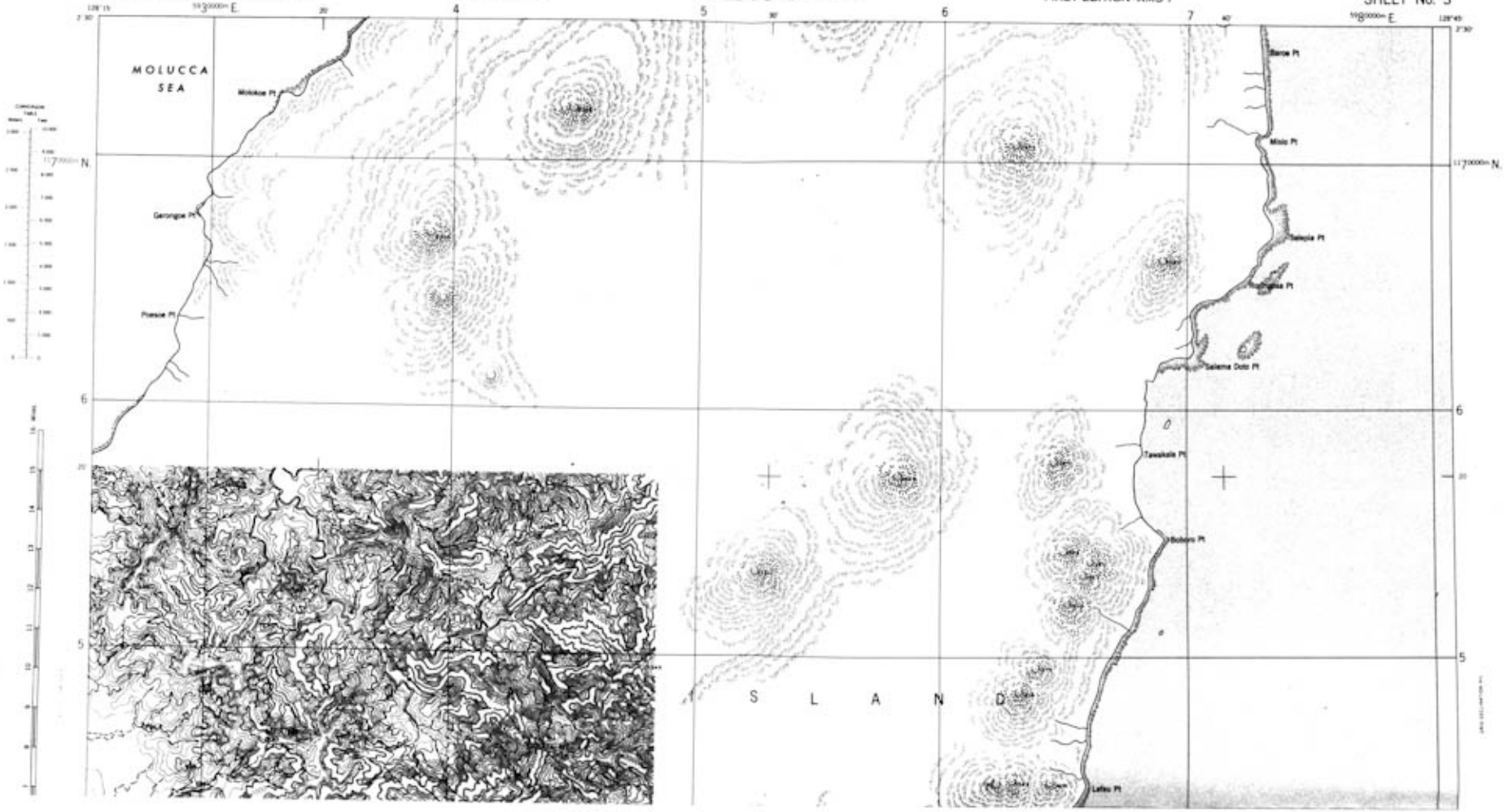
MOLUCCAN ISLANDS 1:125,000

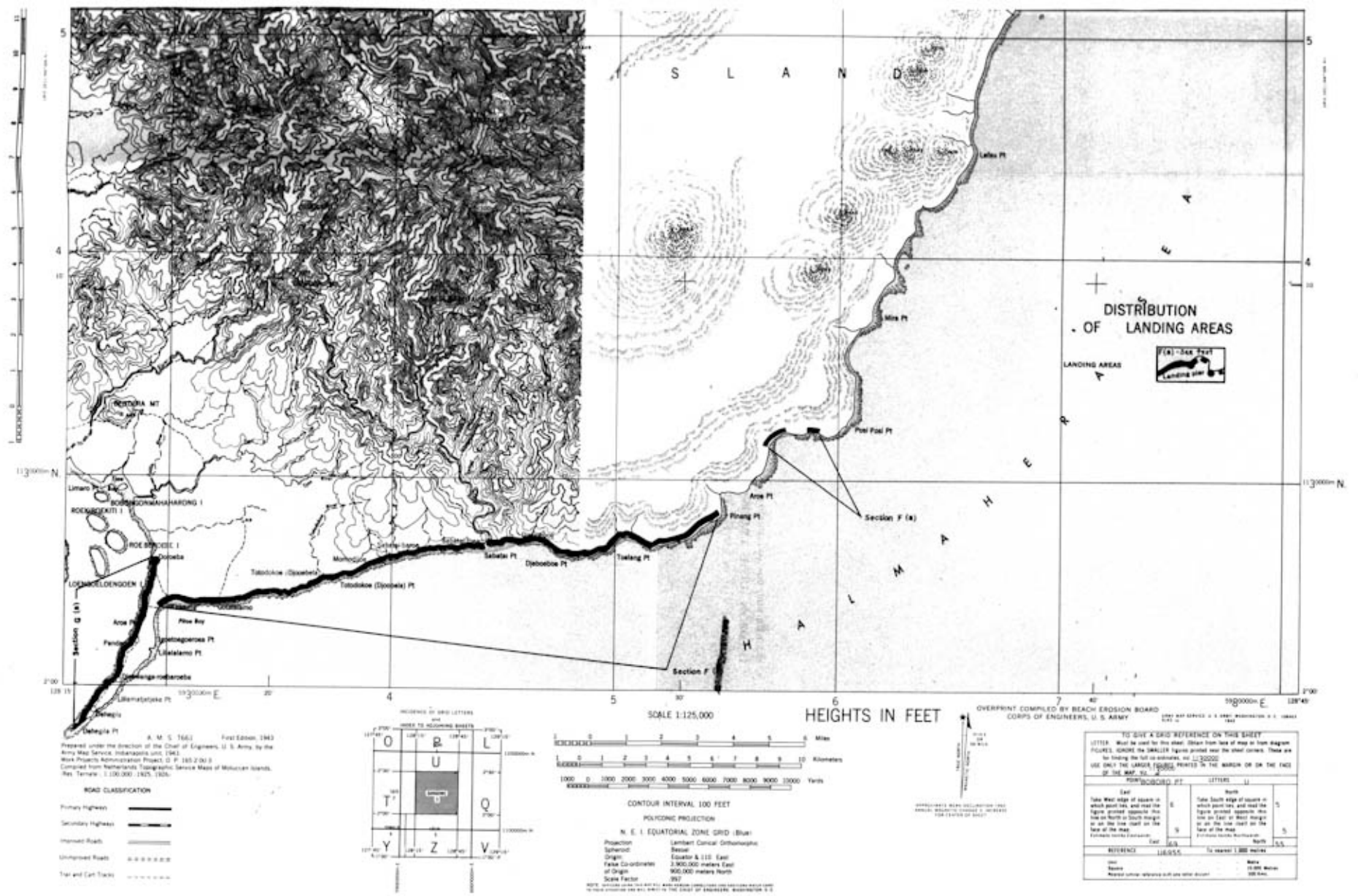
For use by War and Navy Department Agencies only. Not for sale or distribution

SANGOWE

FIRST EDITION - AMS 1

PLAN No. 10
JANIS 155
SHEET No. 3




S L A N D
DISTRIBUTION
OF LANDING AREAS
LANDING AREAS
Section F (a)
Section F
Section G (a)
Lelles Pt
Mina Pt
Pasi Pasi Pt
Area Pt
Pinang Pt
Salatai Pt
Djeboeboe Pt
Tselang Pt
Totodokoe (Djoeboeb)
Totodokoe (Djoeoeta) Pt
Pitow Bay
Lilalalamo Pt
Lilematjoteka Pt
Dehegila Pt
Limaro I.
ROEMOEKITI I.
ROE BROEDEE I.
LOEMOELOENGOEN I.
BOEMOEMAHARONG I.
HEIGHTS IN FEET
SCALE 1:125,000
Miles
Kilometers
Yards
CONTOUR INTERVAL 100 FEET
POLYCONIC PROJECTION
N. E. I. EQUATORIAL ZONE GRID (Blue)
Projection Lambert Conical Orthomorphic
Spheroid Bessel
Origin Equator & 115 East
False Co-ordinates of Origin 2,900,000 meters East
900,000 meters North
Scale Factor .997
ROAD CLASSIFICATION
Primary Highway
Secondary Highway
Improved Road
Unimproved Road
Trail and Cart Tracks
A. M. S. 7661 First Edition, 1943
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis Unit, 1943
Work Projects Administration Project, O. P. 165-2-00-3
Compiled from Netherlands Topographic Service Maps of Moluccan Islands, Res. Ternate, 1:100,000 - 1925, 1926.
OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY
TO GIVE A GRID REFERENCE ON THIS SHEET
POINT SCISCIRO PT
LETTERS U
East
North
REFERENCE U6955
No. 3 SANGOWE
N200 E12815/30
DECLASSIFIED

PLAN 17 JANIS No. 155 [redacted]

TATE SHEET, MOROTAI—Topography
and landing areas

~~CONFIDENTIAL~~

MOLUCCAN ISLANDS 1:125,000

For use by War and Navy Department Agencies only Not for sale or distribution

TATE

INCIDENCE OF GRID LETTERS AND INDEX TO ADJOINING SHEETS

O | P
T | U
Y | Z

TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 11 30000
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz. 30000

POINT SOEPOE — LETTERS T

East		North	
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map.	9	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map.	4
Estimate tenths Eastwards	5	Estimate tenths Northwards	1
East	95	North	41

REFERENCE T 9541 — To nearest 1,000 metres

Unit	Metre
Square	10,000 Metres
Nearest similar reference with one letter distant	500 Kms.

SCALE 1:125,000

1 0 1 2 3 4 5 6 Miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 Yards

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 100° East
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North
Scale Factor	.997

NOTE: OFFICERS USING THIS MAP WILL KEEP GRID CORRECTIONS AND OBSTRUCTIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

APPROXIMATE MEAN DECLINATION 1942 ANNUAL MAGNETIC CHANGE 2' INCREASE FOR CENTER OF SHEET

ROAD CLASSIFICATION

- Primary Highways
- Secondary Highways
- Improved Roads
- Unimproved Roads
- Trail and Cart Tracks

127°40' 2°30' 587000m E. 50' 8 9 128°00' 59 0°

117000m N. 6 20 5

SEDENG (KALAPA) ISLAND

YAMOERDEMAGOELA ISLAND

DOCA ISLAND

DEMERETE I.

NORTH LOLODA ISLANDS

BOI ISLAND

Bicca Pt.

M O R O T A

C E L E B E S

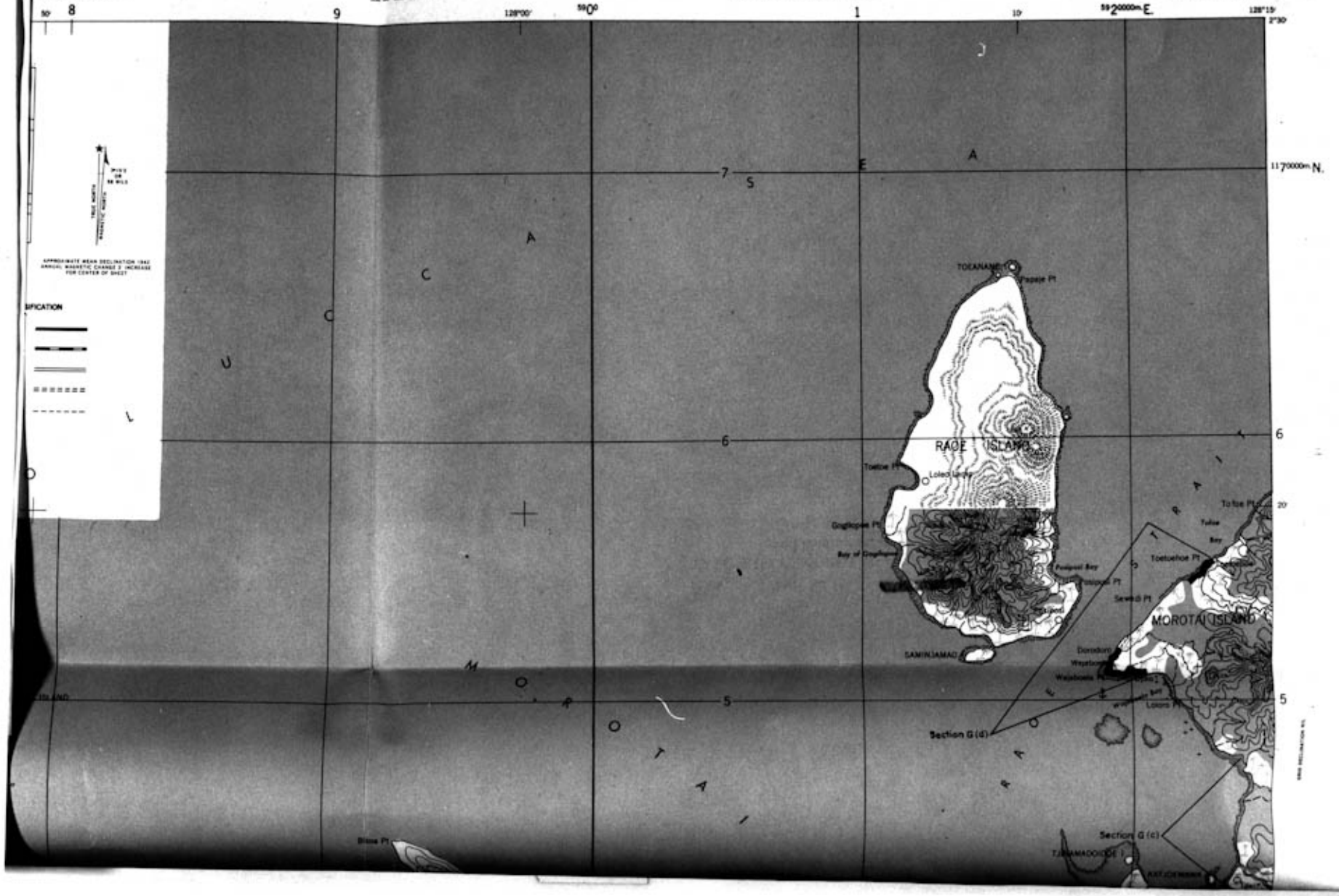
CONFIDENTIAL

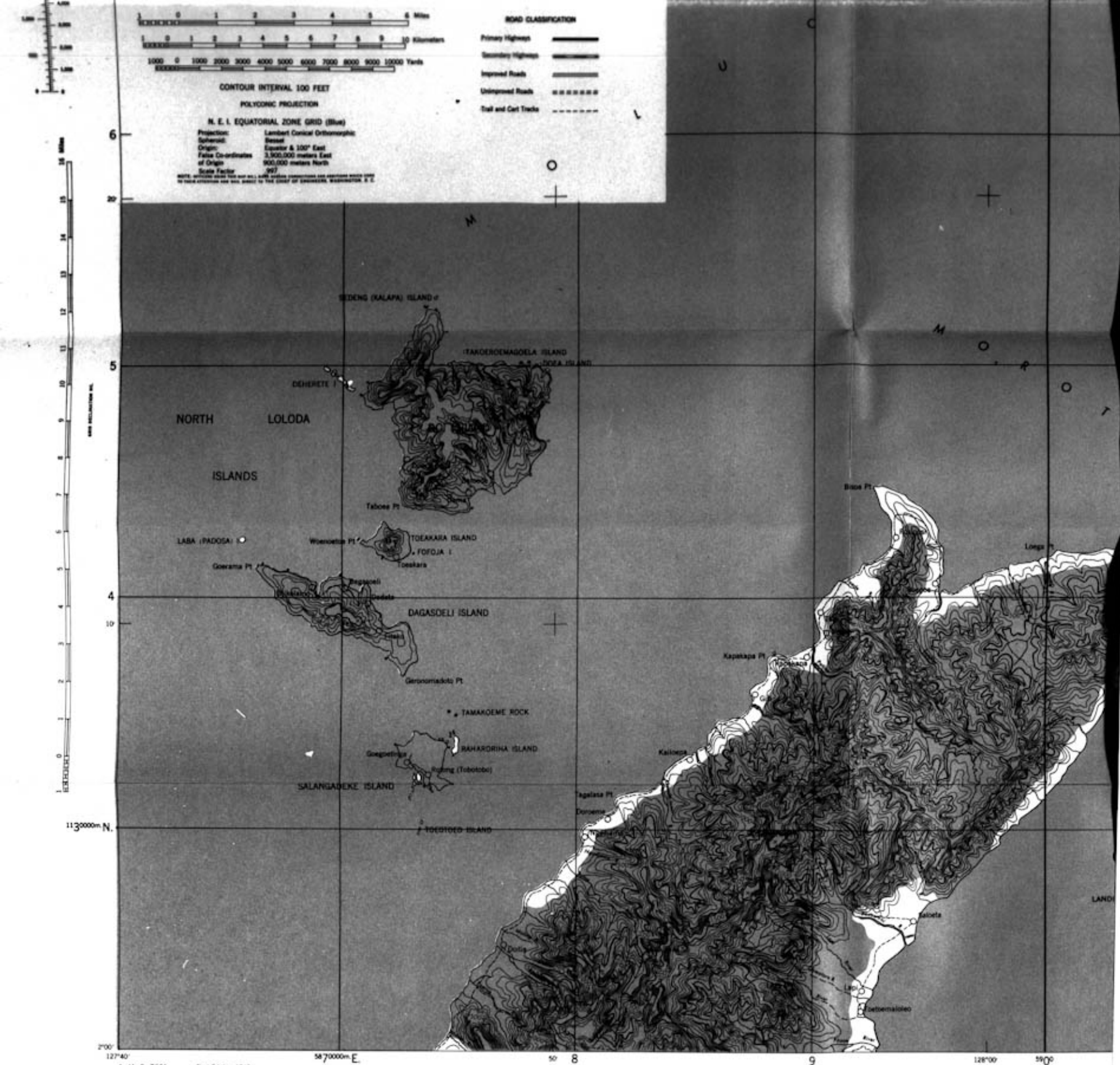
For use by Navy Department Agencies only
Not for sale or distribution

TATE

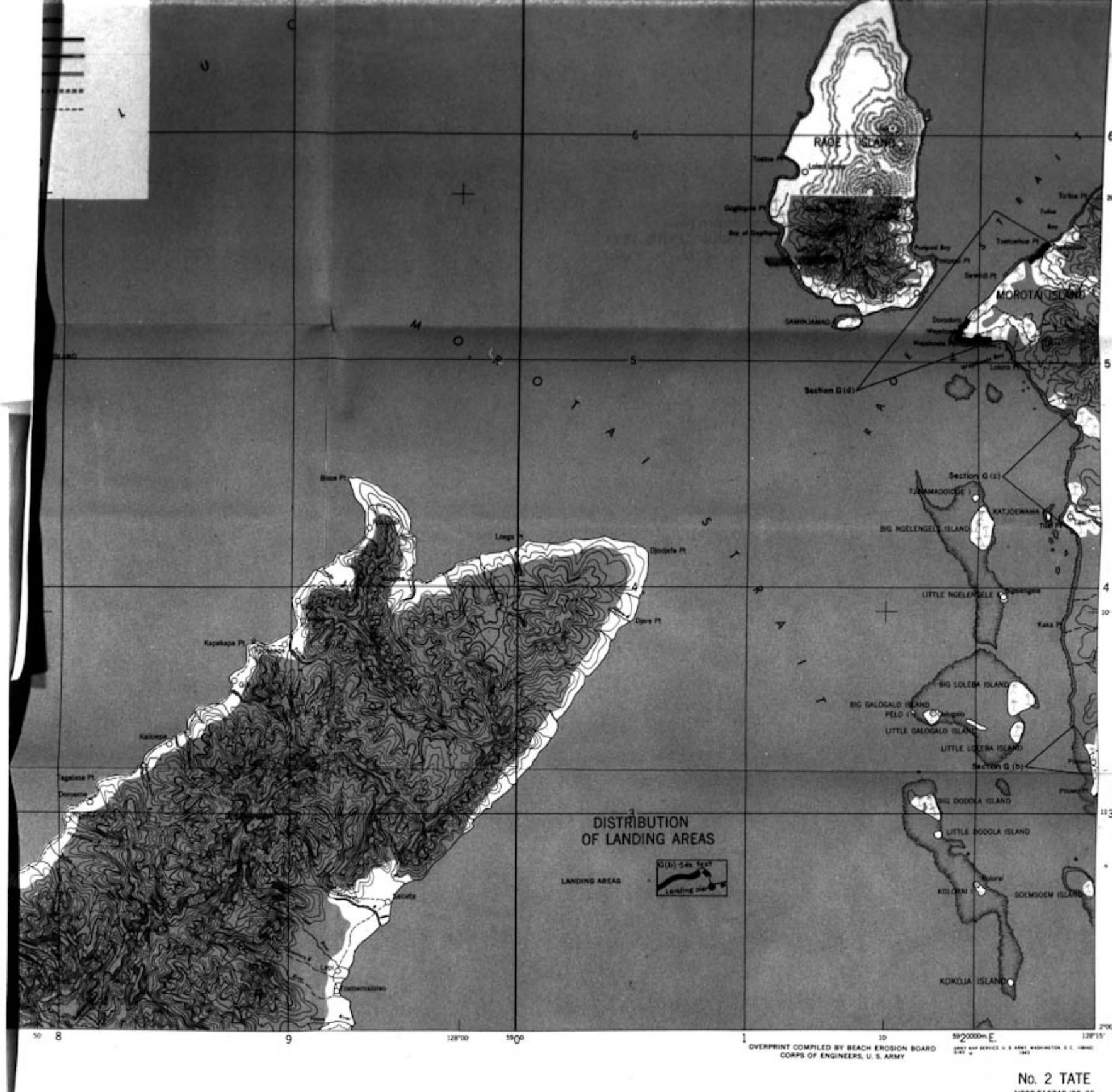
FIRST EDITION - AMS 1

PLAN NO. 17
JANIS 155
SHEET No. 2





A. M. S. T661 First Edition, 1943
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1943.
Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service maps of Moluccan Islands, (Res. Ternate), 1:100,000, (1925, 1926).



OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 1943

No. 2 TATE

PLAN 18 JANIS No. 155 [redacted]

SANGIHE ISLAND SHEET—Topography, landing areas, coral, and mangrove

PLAN NO. 18
JANIS 155

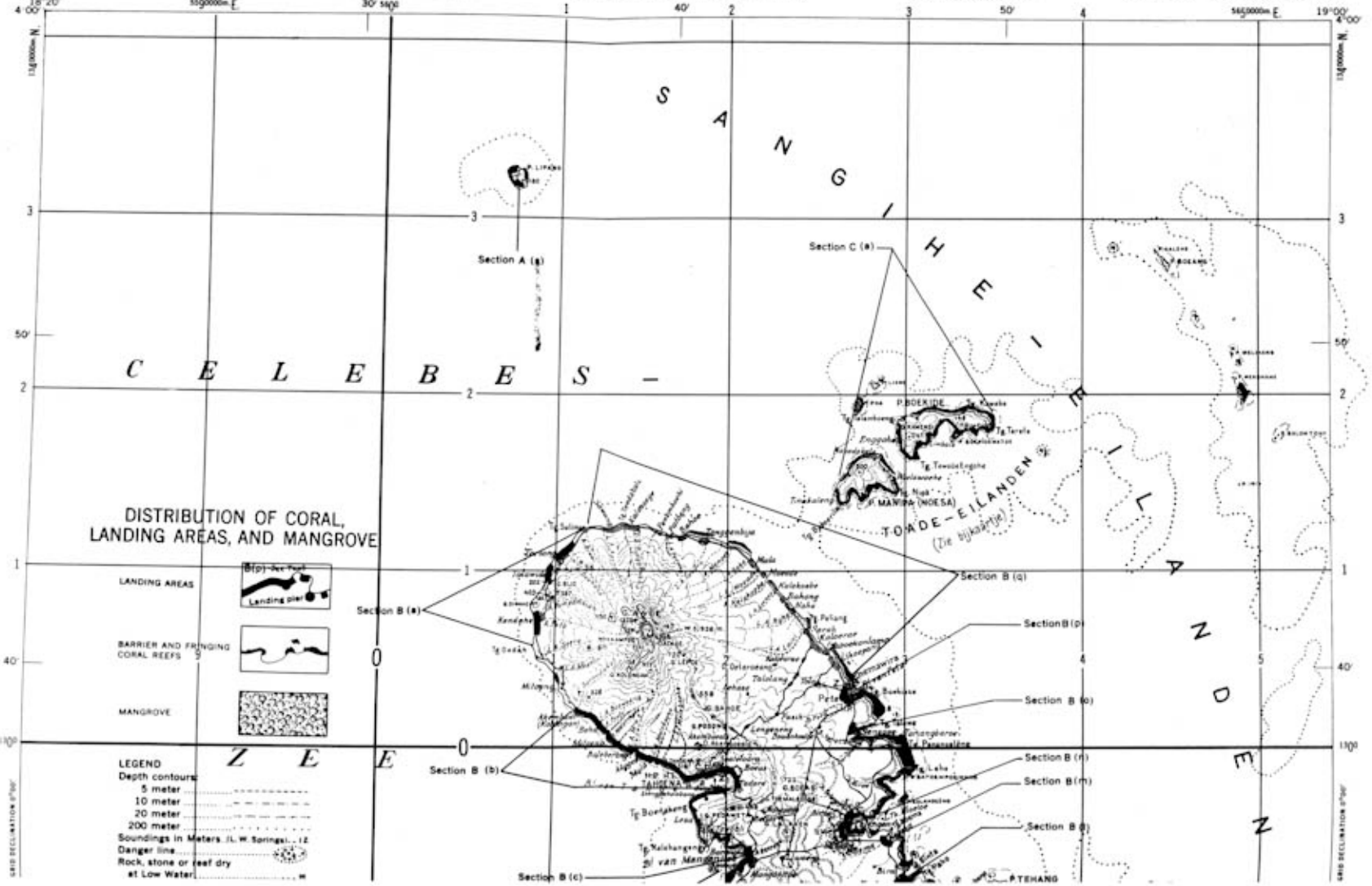
CELEBES 1:200,000

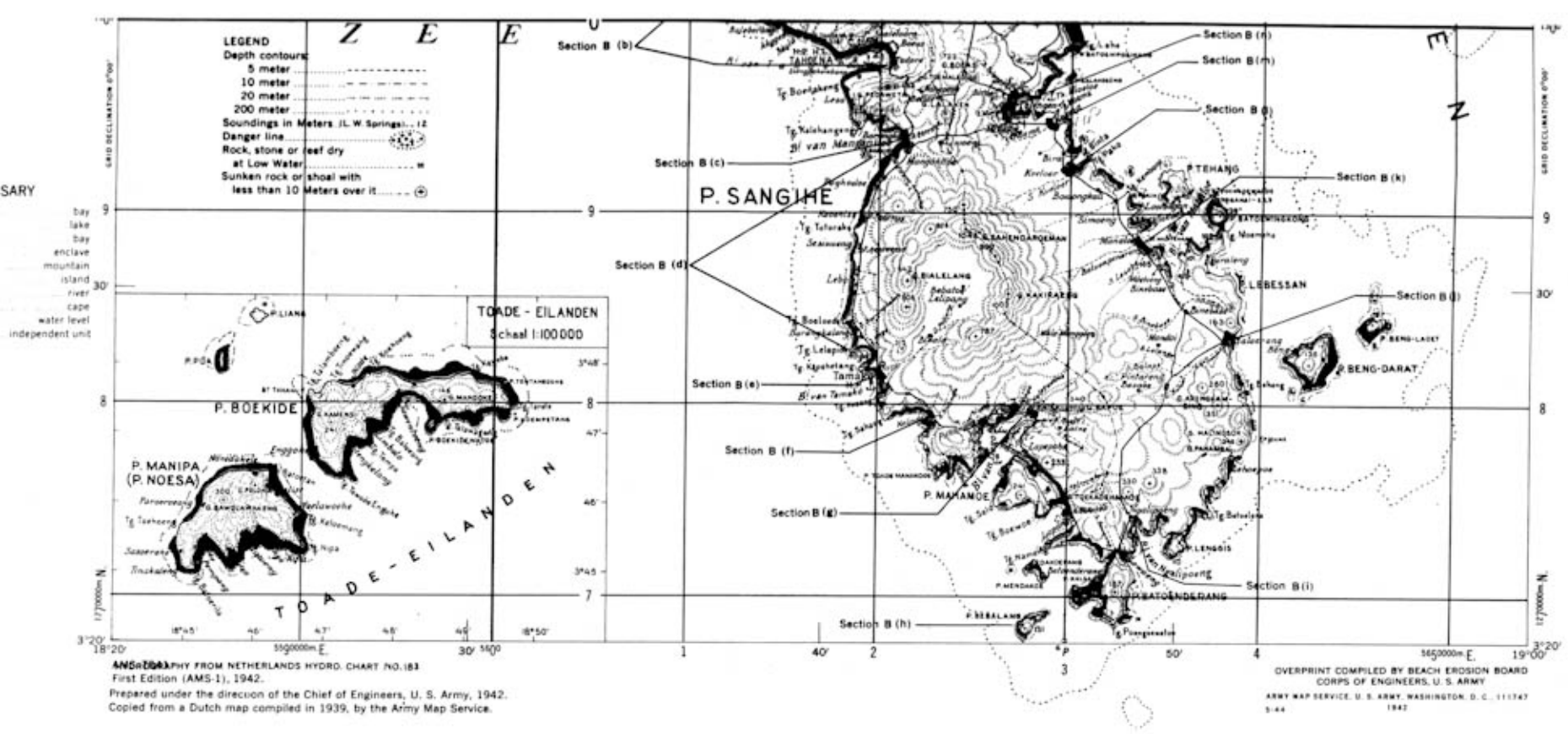
For use by
War and Navy Department Agencies only
Not for sale or distribution

SANGIHE ISLAND

FIRST EDITION-AMS 1

SHEET 92-93/VII-VIII





TOPOGRAPHY FROM NETHERLANDS HYDRO. CHART NO. 183
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

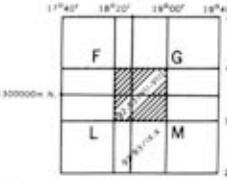
OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 111747
5-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

Division	Sangihe and Talaud Islands
Sub-division	Sangihe and Talaud Islands
A. Province	Kendahe-Tahoena
B. Province	Tawoekang
C. Province	Manganitoe

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS



Meridian of Batavia
(which is 106°48'27.79"E of Greenwich)

Scale 1:200,000

2 0 2 4 6 8 10 12 14 Miles
5 0 5 10 15 20 Kilometers
5000 0 5000 10000 15000 20000 Yards

HEIGHTS IN METERS

LEGEND

Automobile road	Settlement	Wayside stopping point	
Wagon road	Sparsely settled area	Radio station (receiving only)	
Horse path	Rice field	Mosque	
Foot path	Springs	Beacon	River
(a) - Bridge (b) - Kilometer post	Reefs	Anchorage	Contours
Provincial boundary	Sand	Marsh	
Divisional boundary	Spot elevations	Swamp	Form lines
Primary triangulation point	Secondary triangulation point		

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DATA TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

CONFIDENTIAL

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale of the north edge of the map.

TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER - Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES, IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz: LETTERS
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz: 123456
POINT LIWOENG LETTERS M

East		North	
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map.	2	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map.	9
	3		4
East	23	North	94

REFERENCE M2394 To nearest 1,000 metres

Unit	Metre
Square	10,000 Metres
Printed number references with one letter denote	100 Kms

N. E. I. EQUATORIAL ZONE GRID (Blue)

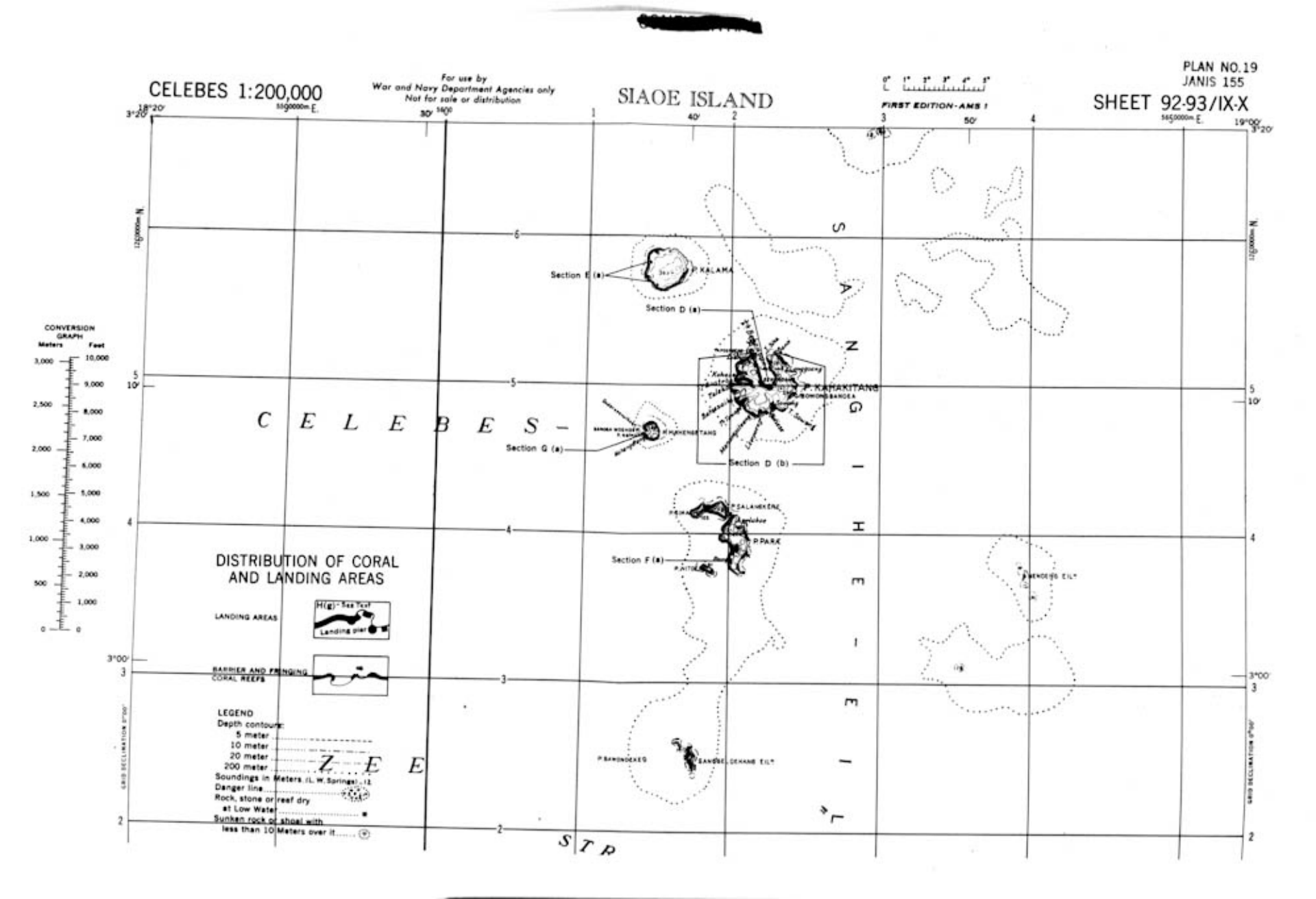
Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

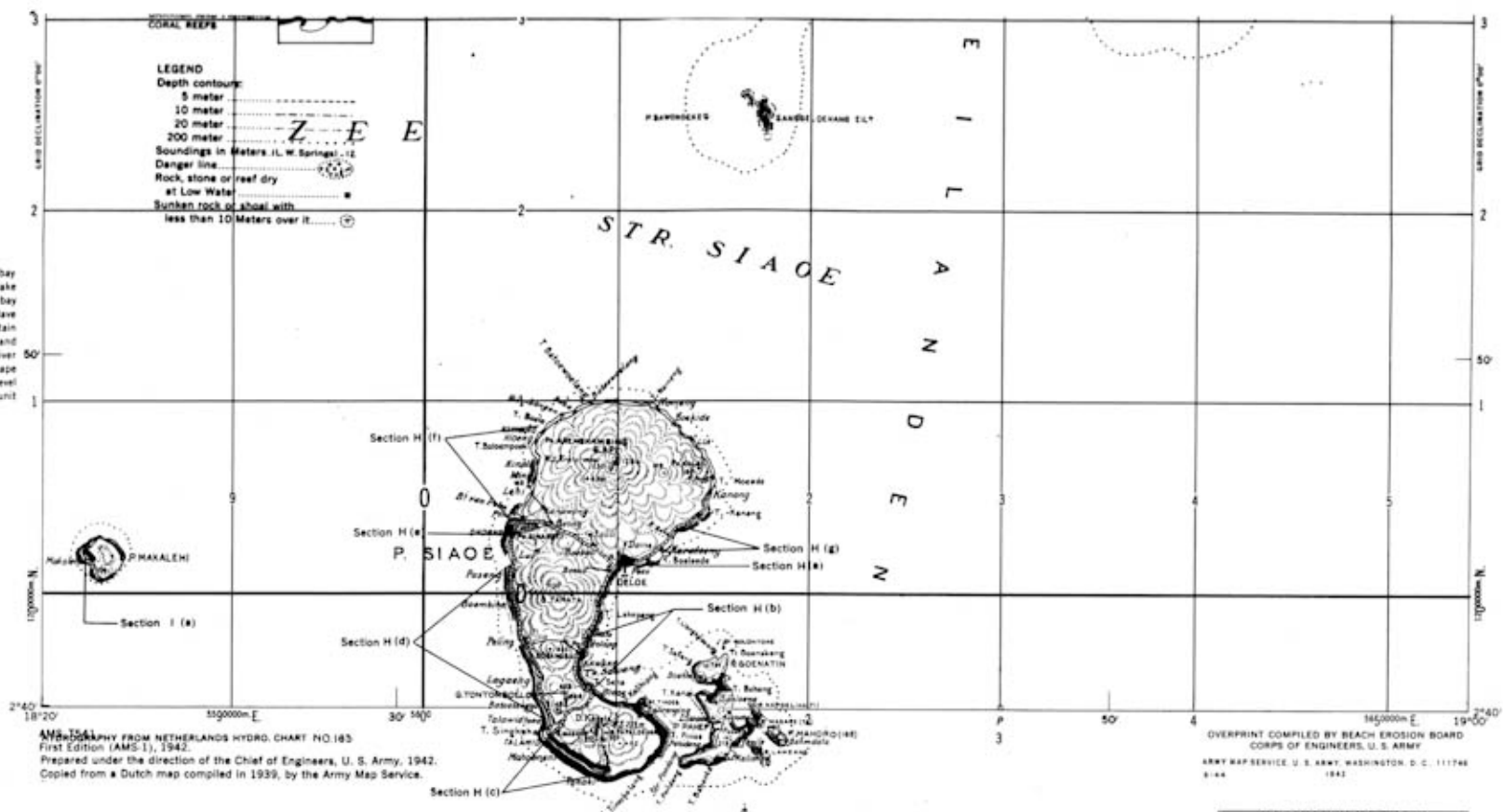
SANGIHE ISLAND
N320-E12508/40

DECLASSIFIED
By Authority of JCS letter, 7-25-75
AUG 1 1975

PLAN 19 JANIS No. 155 [redacted]

SIAOE ISLAND SHEET, SANGIHE ISLANDS—Topography, landing areas, and coral


CELEBES 1:200,000
For use by War and Navy Department Agencies only Not for sale or distribution
SIAOE ISLAND
FIRST EDITION-AMS 1
PLAN NO. 19
JANIS 155
SHEET 92-93/IX-X
CONVERSION GRAPH
Meters
Feet
DISTRIBUTION OF CORAL AND LANDING AREAS
LANDING AREAS
H(g) - Sea Reef
Landing pier
BARRIER AND FRINGING CORAL REEFS
LEGEND
Depth contours:
5 meter
10 meter
20 meter
200 meter
Soundings in Meters (L.W. Springs) - 12
Danger line
Rock, stone or reef dry at Low Water
Sunken rock or shoal with less than 10 Meters over it
Section E (a)
Section D (a)
Section G (a)
Section D (b)
Section F (a)
P. KALAMA
P. KAHAKITANG
P. KAHENETANG
P. SALAWEKENE
P. PARE
P. BANDIDEKES
BANDIE DEHANG EIL
SANGIHE ISLANDS
CELEBES SEA
STRAIT



GLOSSARY

Baai: B	bay
Danau: D	lake
Djko: Dk	bay
Enc	enclave
Goenoeng: G	mountain
Poelau: P	island
Salo: S	river
Tandjoeng: Tg	cape
Waterspiegel: WS	water level
Zelfbestuurder: ZB	independent unit

TOPOGRAPHY FROM NETHERLANDS HYDRO. CHART NO.185.
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 111746
8-44 1943

INDEX TO ADMINISTRATIVE DIVISIONS

Division	Sangihe and Talaud Islands
Sub-division	Sangihe and Talaud Islands
Province	Siaoe

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

LEGEND

Automobile road	Settlement	Wayside stopping point
Wagon road	Sparsely settled area	Radio station
Horse path	Rice field	Mosque
Foot path	Springs	Beacon
(a) Bridge (b) Kilometer post	Reefs	Anchorage
Provincial boundary	Sand	Marsh
Divisional boundary	Spot elevations	Swamp
Primary triangulation point	Secondary triangulation point	Contours (UNSURVEYED)
		River
		Form lines

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL THEM TO CHIEF OF ENGINEERS, WASHINGTON, D. C.

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER - Must be used for this sheet. Obtain from face of map or from diagram
FIGURES - IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 32 44 22
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz. 51 60 00
FIRST READING — LETTER — SECOND READING
East — Take West edge of square in which point lies and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. — North — Take South edge of square in which point lies and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map.
REFERENCE WORDS — To record 1,000 metres

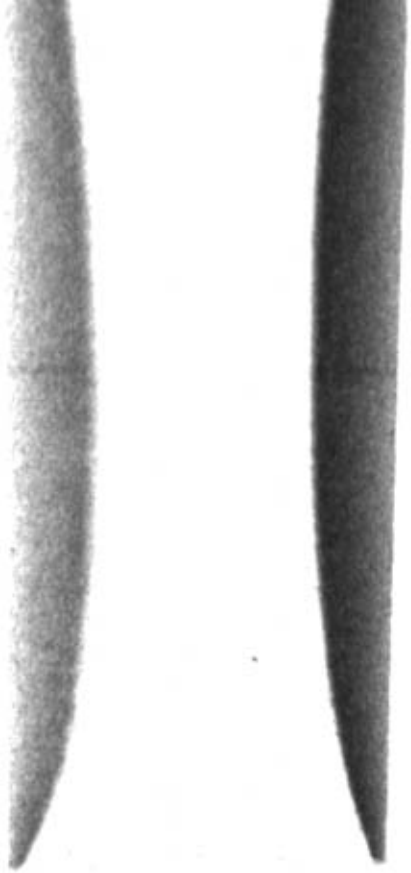
N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH as plotted on the degree scale at the north edge of the map.

SIAOE ISLAND
N240-E12508/40



PLAN 20 JANIS No. 155 [redacted]

TAHOELANDANG ISLAND SHEET, SANGIHE ISLANDS—Topography, landing areas, coral, and mangrove

CELEBES 1:200,000

For use by War and Navy Department Agencies only Not for sale or distribution

TALOELANDANG ISLAND

FIRST EDITION-AMS 1

PLAN NO. 20
JANIS 155
SHEET 92-93/XI-XII

CONVERSION GRAPH
Meters / Feet

P. SIAOE

STR. TAHOELANDANG

P. PASIGE

P. TAHOELANDANG

P. ROEANG

Section J (c)
Section J (b)
Section J (a)
Section K (a)

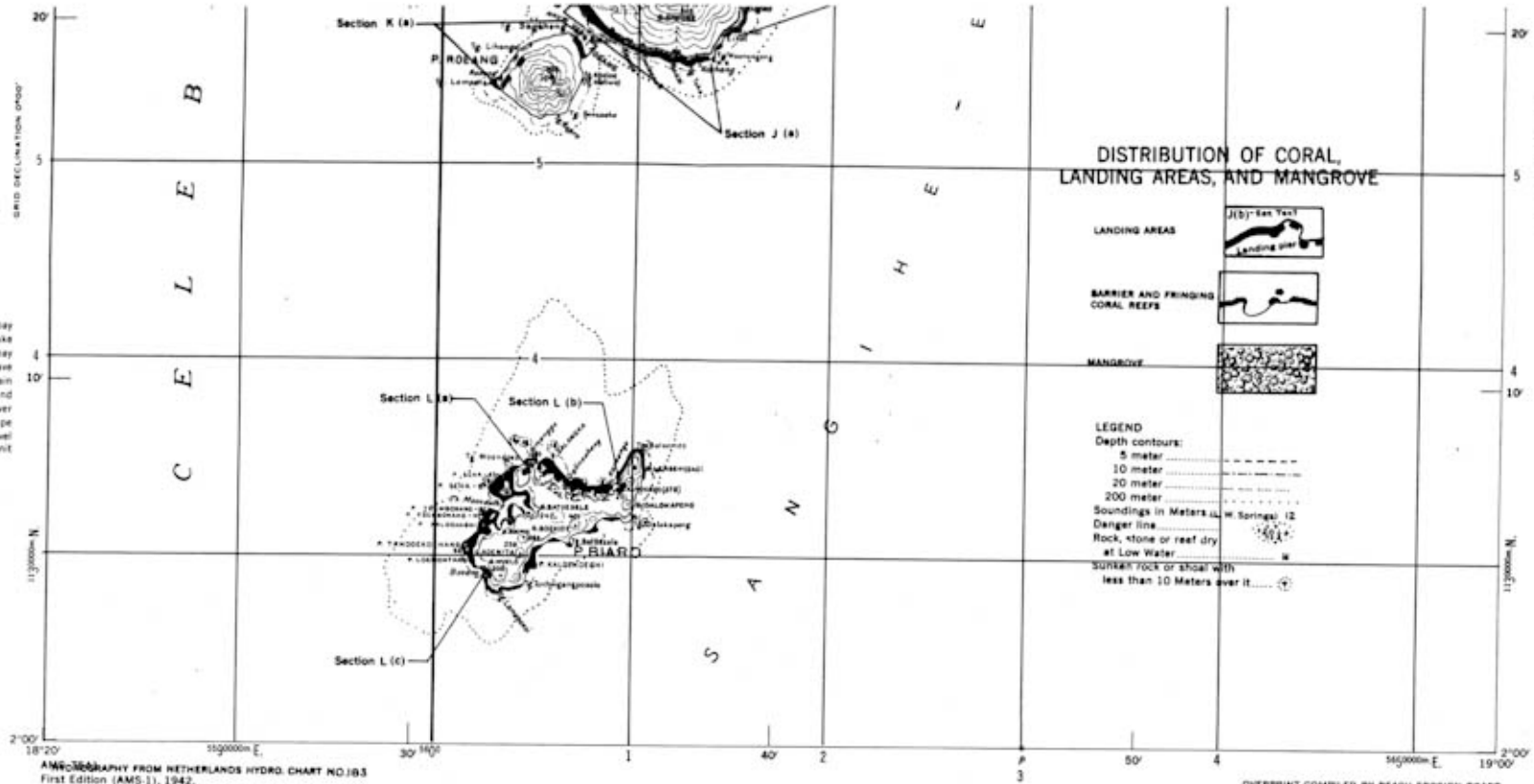
CELEBES SEE

CELEBES SEE

DISTRIBUTION OF CORAL, LANDING AREAS, AND MANGROVE

LANDING AREAS

GRID DECLINATION 0°00'



GLOSSARY

Baai: B	bay
Danau: D	lake
Djiko: Dk	bay
Enc	enclave
Goenoeng: G	mountain
Poeloe: P	island
Salo: S	river
Tandjoeng: Tg	cape
Waterspiegel: WS	water level
Zelfbestuurder: ZB	independent unit

DISTRIBUTION OF CORAL, LANDING AREAS, AND MANGROVE

LANDING AREAS — J(b)- Sea Trail, Landing pier

BARRIER AND FRINGING CORAL REEFS

MANGROVE

LEGEND

Depth contours:
- 5 meter
- 10 meter
- 20 meter
- 200 meter

Soundings in Meters — H. Springs 12

Danger line

Rock, stone or reef dry at Low Water

SUNKEN ROCK or shoal with less than 10 Meters over it

PHOTOGRAPHY FROM NETHERLANDS HYDRO. CHART NO.183
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY
ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 11 FEB. 1942

INDEX TO ADMINISTRATIVE DIVISIONS

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Division	Sangihe and Talaud Islands
Sub-division	Sangihe and Talaud Islands
1. Province	Tahoelandang
2. Province	Siaoe

Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

Scale 1:200,000

2 0 2 4 6 8 10 12 14 Miles
5 0 5 10 15 20 Kilometers
5000 0 5000 10000 15000 20000 Yards

HEIGHTS IN METERS

TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. NORTH the SMALLER figures printed near the sheet corners. These are for finding the lat co-ordinates, viz. 59°00'00"
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz. 59°00'00"

POINT KARANGAS — LETTER R

East		North	
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map.	0	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map.	9
	3		4
East	0.9	North	3.4

REFERENCE R 0934 — To nearest 1,000 metres

LEGEND

Automobile road	Settlement	Wayside stopping point	
Wagon road	Sparsely settled area	Radio station (Receiving only)	
Horse path	Rice field	Mosque	UNSURVEYED
Foot path	Springs	Beacon	River
(a) - Bridge (b) - Kilometer post	Reefs	Anchorage	Contours
Provincial boundary	Sand	Marsh	
Divisional boundary	+496 Spot elevations	Swamp	Form lines
Primary triangulation point	Secondary triangulation point		

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

CONFIDENTIAL

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the north edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale at the north edge of the map.

N. E. I. EQUATORIAL ZONE GRID (Blue)

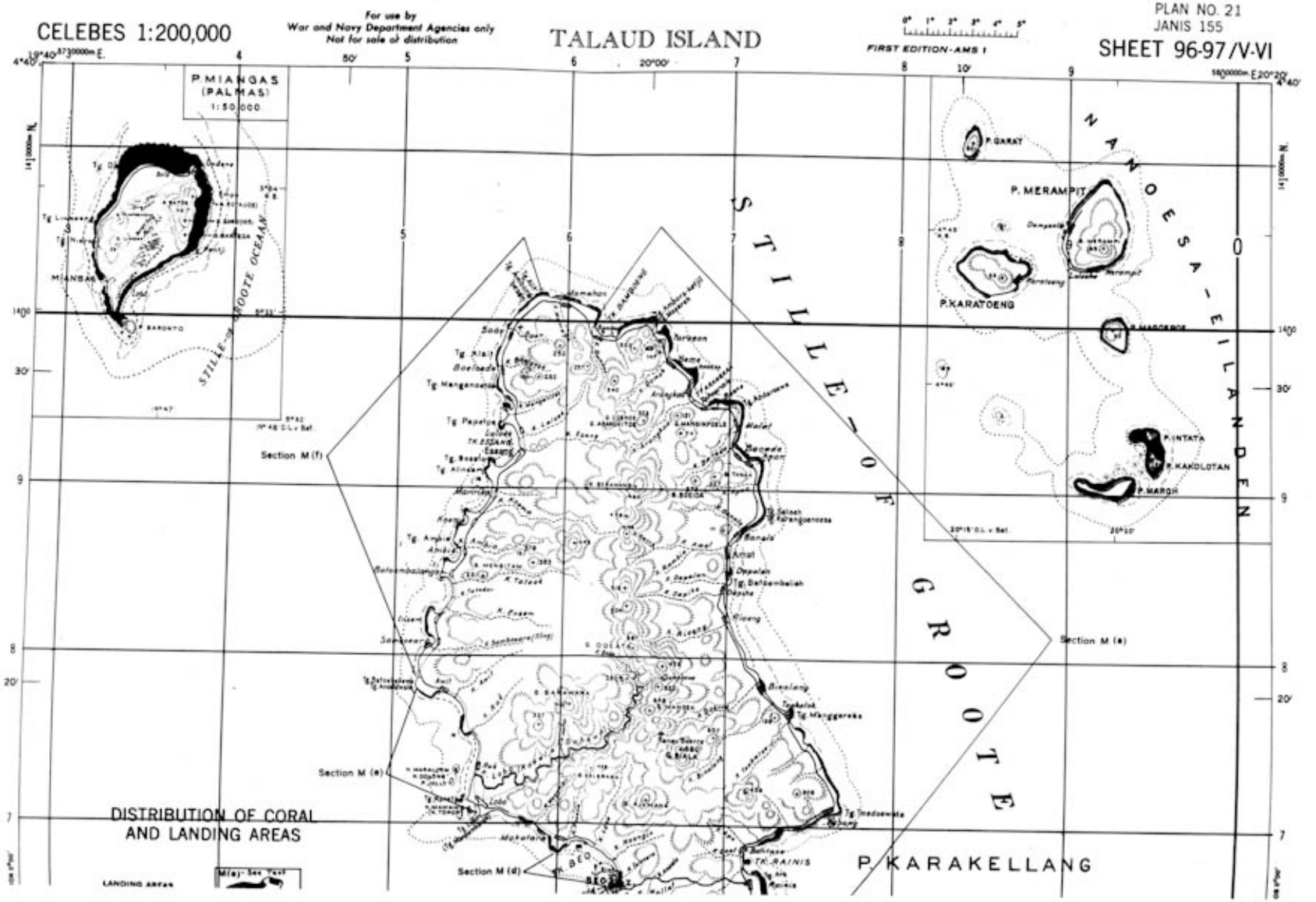
Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

TAHOELANDANG ISLAND
N200-E12508/40

DECLASSIFIED
By Authority of JCS letter, 7-25-75

PLAN 21 JANIS No. 155 C[redacted]

TALAUD ISLANDS SHEET—Topography, landing areas, and coral


CELEBES 1:200,000
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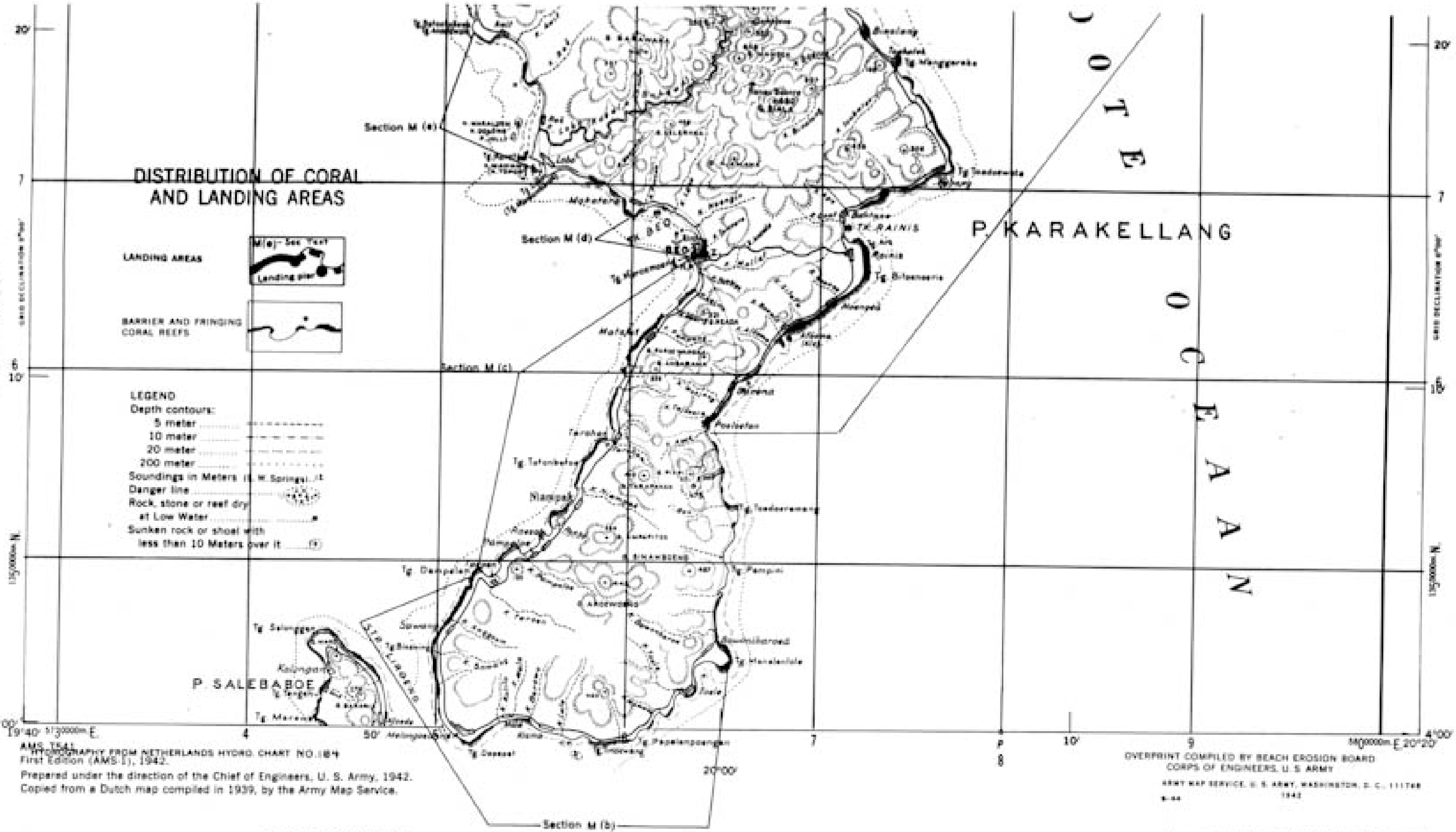
TALAUD ISLAND
FIRST EDITION-AMS 1
PLAN NO. 21
JANIS 155
SHEET 96-97/V-VI
P. MIANGAS (PALMAS) 1:50,000
STILLE-OOSTE OCEAAN
STILLE-OOSTE GROOTE
NANOESA-EILANDEN
P. GARAT
P. MERAMPIT
P. KARATOENG
P. INTATA
P. KAKOLOTAN
P. MARGH
Section M (f)
Section M (e)
Section M (d)
P. KARAKELLANG
CONVERSION GRAPH
Meters
Feet
DISTRIBUTION OF CORAL AND LANDING AREAS
GLOSSARY
LANDING AREAS

GLOSSARY

Baai: B	bay
Danau: D	lake
Djiko: Dk	bay
Enc	enclave
Goenoeng: G	mountain
Poelau: P	island
Salo: S	river
Tandjoeng: Tg	cape
Waterspiegel: WS	water level
Zelfbestuurder: ZB	independent unit

DISTRIBUTION OF CORAL AND LANDING AREAS



AMS T541
HYDROGRAPHY FROM NETHERLANDS HYDRO. CHART NO. 184
First Edition (AMS-1), 1942.

Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

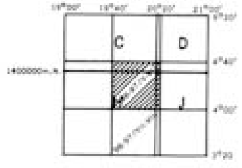
OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 11176B
1942
6-44

INDEX TO
ADMINISTRATIVE DIVISIONS

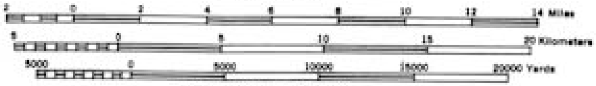
Division	Sangihe and Talaud Islands
Sub-division	Sangihe and Talaud Islands
Province	Talaud Islands

INCIDENCE OF GRID LETTERS
and
INDEX TO ADJOINING SHEETS



Meridian of Batavia
(which is 106°48'27.79" E of Greenwich)

Scale 1:200,000



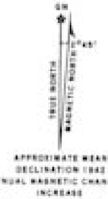
HEIGHTS IN METERS

LEGEND

- Automobile road
- Wagon road
- Horse path
- Foot path
- (a) - Bridge (b) - Kilometer post
- Provincial boundary
- Divisional boundary
- Settlement
- Sparsely settled area
- Rice field
- Springs
- Reefs
- Sand
- +496 Spot elevations
- Wayside stopping point
- Radio station (receiving only)
- Mosque
- Beacon
- Anchorage
- Marsh
- Swamp
- River
- Unsurveyed
- Contours
- Form lines
- ΔP Primary triangulation point
- ΔS Secondary triangulation point

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

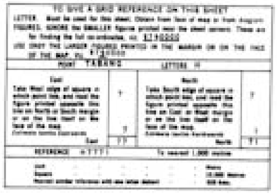
[redacted]



APPROXIMATE MEAN
DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3'
INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale at the north edge of the map.

TO GIVE A GRID REFERENCE ON THIS SHEET



N. E. I. EQUATORIAL ZONE GRID (Blue)

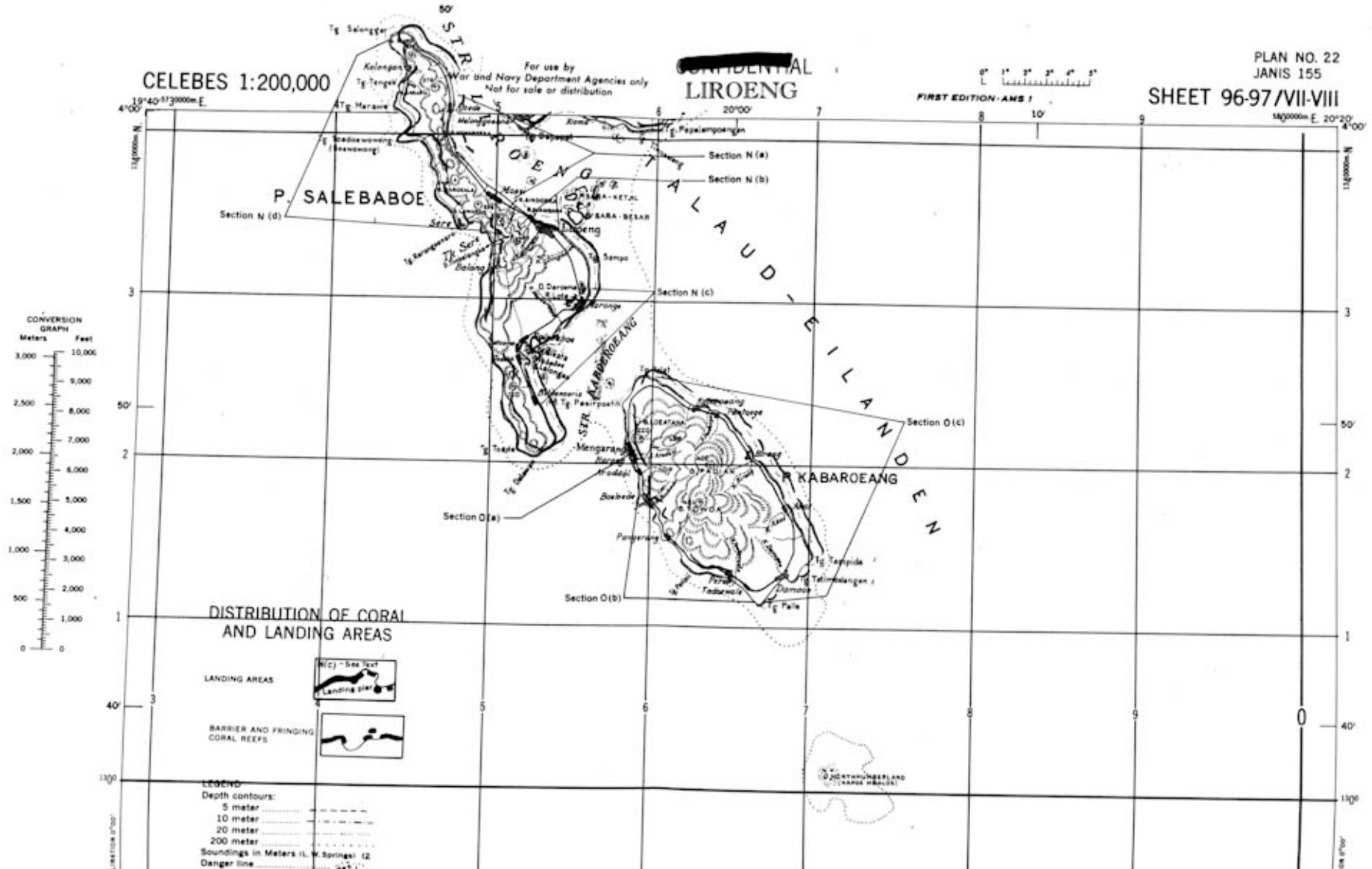
Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

TALAUD ISLANDS
N400-E12628/40

DECLASSIFIED
By Authority of ____________
JCS letter, 7-25-75

PLAN 22 JANIS No. 155 [redacted]

LIROENG SHEET, TALAUD ISLANDS—
Topography, landing areas, and coral


CELEBES 1:200,000
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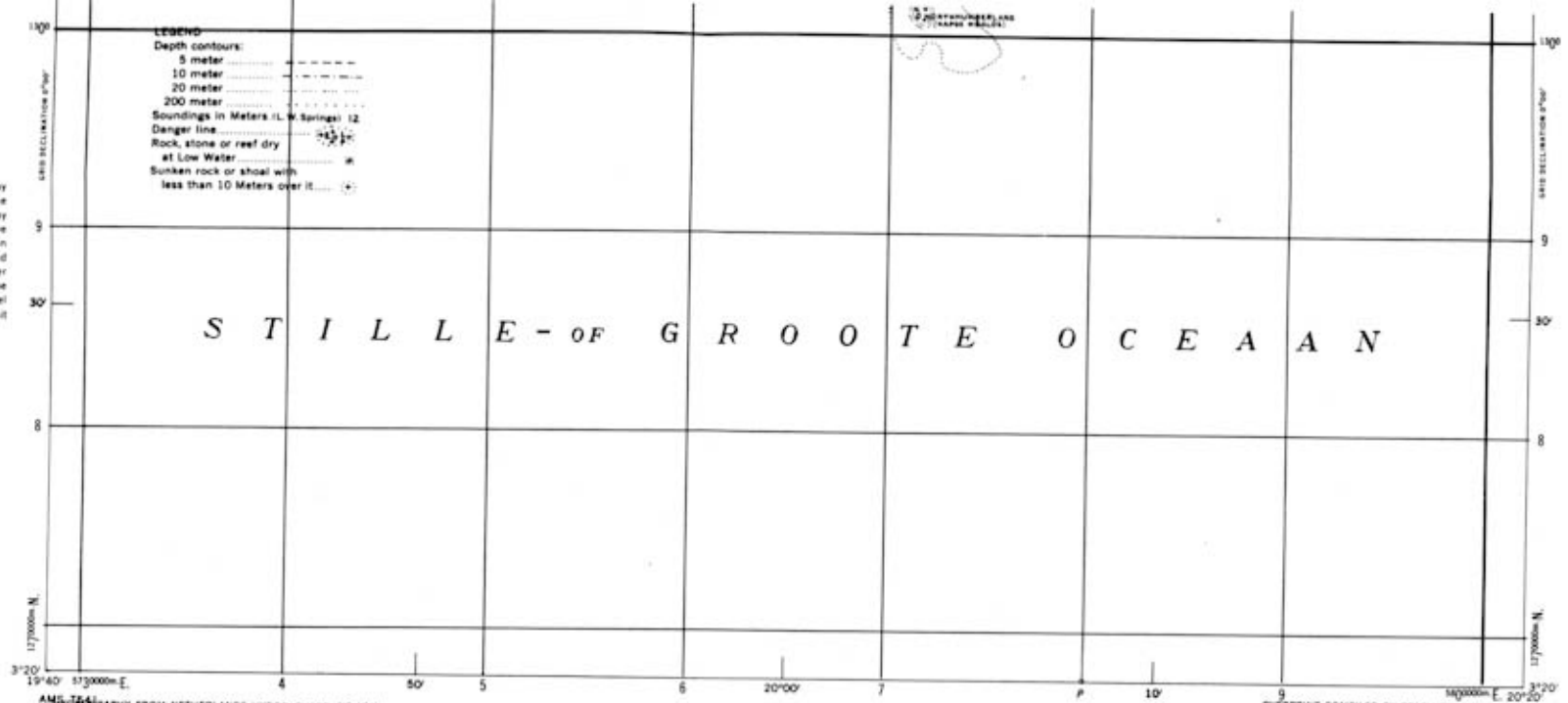
CONFIDENTIAL
LIROENG
PLAN NO. 22
JANIS 155
SHEET 96-97/VII-VIII
FIRST EDITION-AMS 1
P. SALEBABOE
P. KABAROEANG
STR. LIROENG
STR. KABAROEANG
TALAUD-EILANDEN
Section N (a)
Section N (b)
Section N (c)
Section N (d)
Section O (a)
Section O (b)
Section O (c)
CONVERSION GRAPH
Meters
Feet
DISTRIBUTION OF CORAL AND LANDING AREAS
LANDING AREAS
BARRIER AND FRINGING CORAL REEFS
LEGEND
Depth contours:
5 meter
10 meter
20 meter
200 meter
Soundings in Meters (L.W. Springs)
Danger line

GLOSSARY

Baai: B	bay
Danau: D	lake
Dyko: Dk	bay
Enc	enclave
Goenoeng: G	mountain
Poelau: P	island
Salo: S	river
Tandjoeng: Tg	cape
Waterspiegel: WS	water level
Zelfbestuurder: ZB	independent unit



AMS 784
Hydrography from Netherlands Hydro. Chart No. 184
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

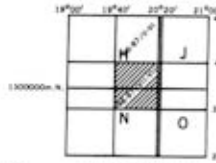
OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 111748
9-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

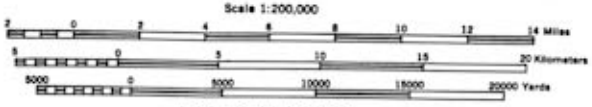
Division	Sangihe and Talaud Islands
Sub-division	Sangihe and Talaud Islands
Province	Talaud Islands

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS



Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

Scale 1:200,000



HEIGHTS IN METERS

LEGEND

Automobile road	Settlement	Wayside stopping point	
Wagon road	Sparsely settled area	Radio station (receiving only)	
Horse path	Rice field	Mosque	
Foot path	Springs	Beacon	River
(a) Bridge (b) Kilometer post	Reefs	Anchorage	Contours
Provincial boundary	Sand	Marsh	
Divisional boundary	Spot elevations	Swamp	Form lines
Primary triangulation point	Secondary triangulation point		

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

CONFIDENTIAL

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale at the north edge of the map.

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

LIROENG
N320-E12628/40

PLAN 23 JANIS No. 155 [redacted]

MINDANAO SEA SHEET, MINDANAO—Topography, landing areas, and coral

[redacted]

PHILIPPINE ISLANDS 1:500.000

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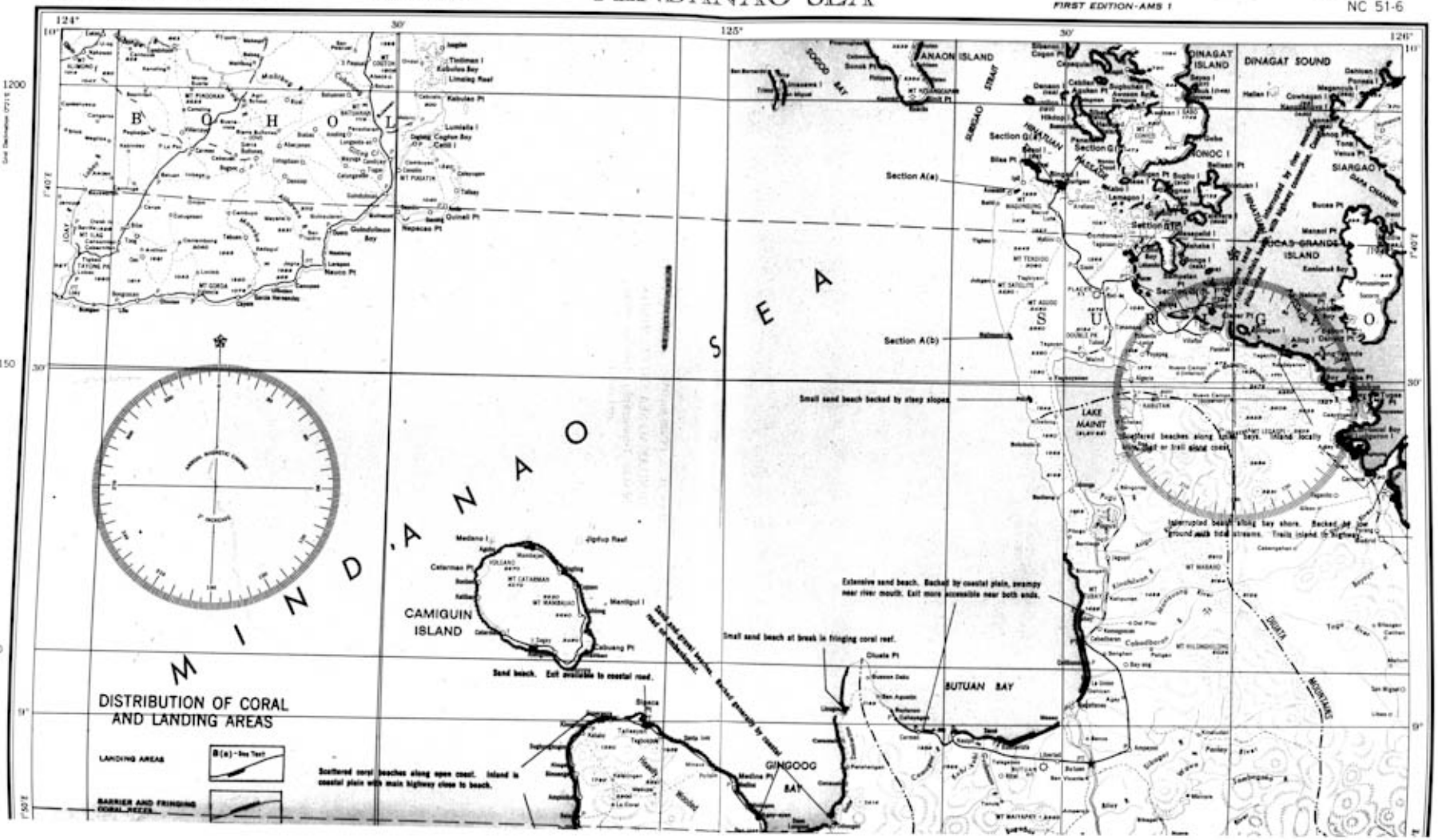
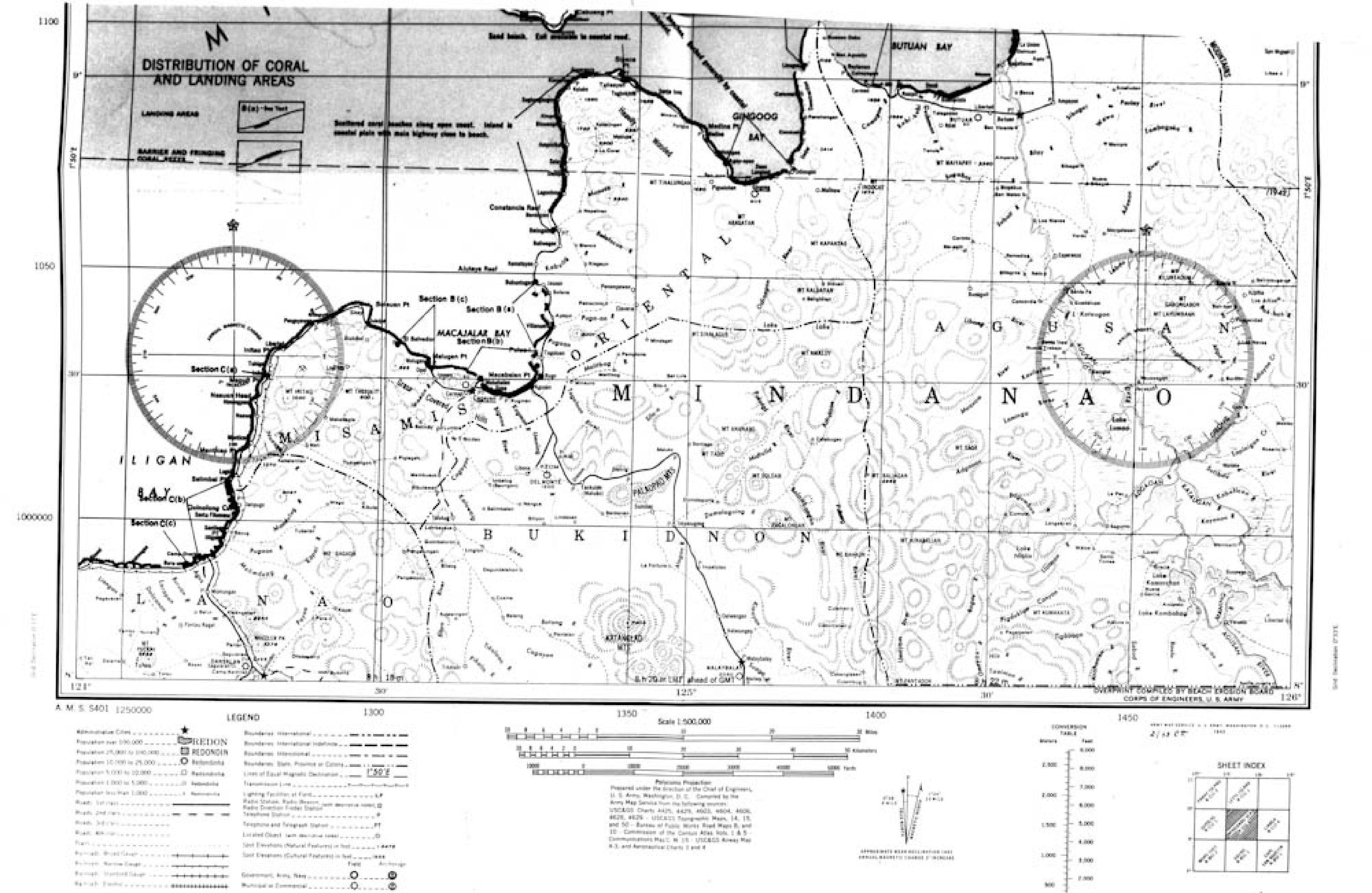
MINDANAO SEA

PLAN NO. 23
JANIS 155
NC 51-6

FIRST EDITION-AMS 1





Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4425, 4429, 4603, 4604, 4606, 4628, 4629 - USC&GS Topographic Maps, 14, 15, and 50 - Bureau of Public Works Road Maps 8, and 10 - Commission of the Census Atlas Vols. 1 & 5 - Communications Map C. M. 15 - USC&GS Airway Map 4-3, and Aeronautical Charts 3 and 4

PLAN 24 JANIS No. 155 [redacted]AL

DIPOLOG SHEET, MINDANAO—Topography, landing areas, and coral

~~CONFIDENTIAL~~

PHILIPPINE ISLANDS 1:500,000

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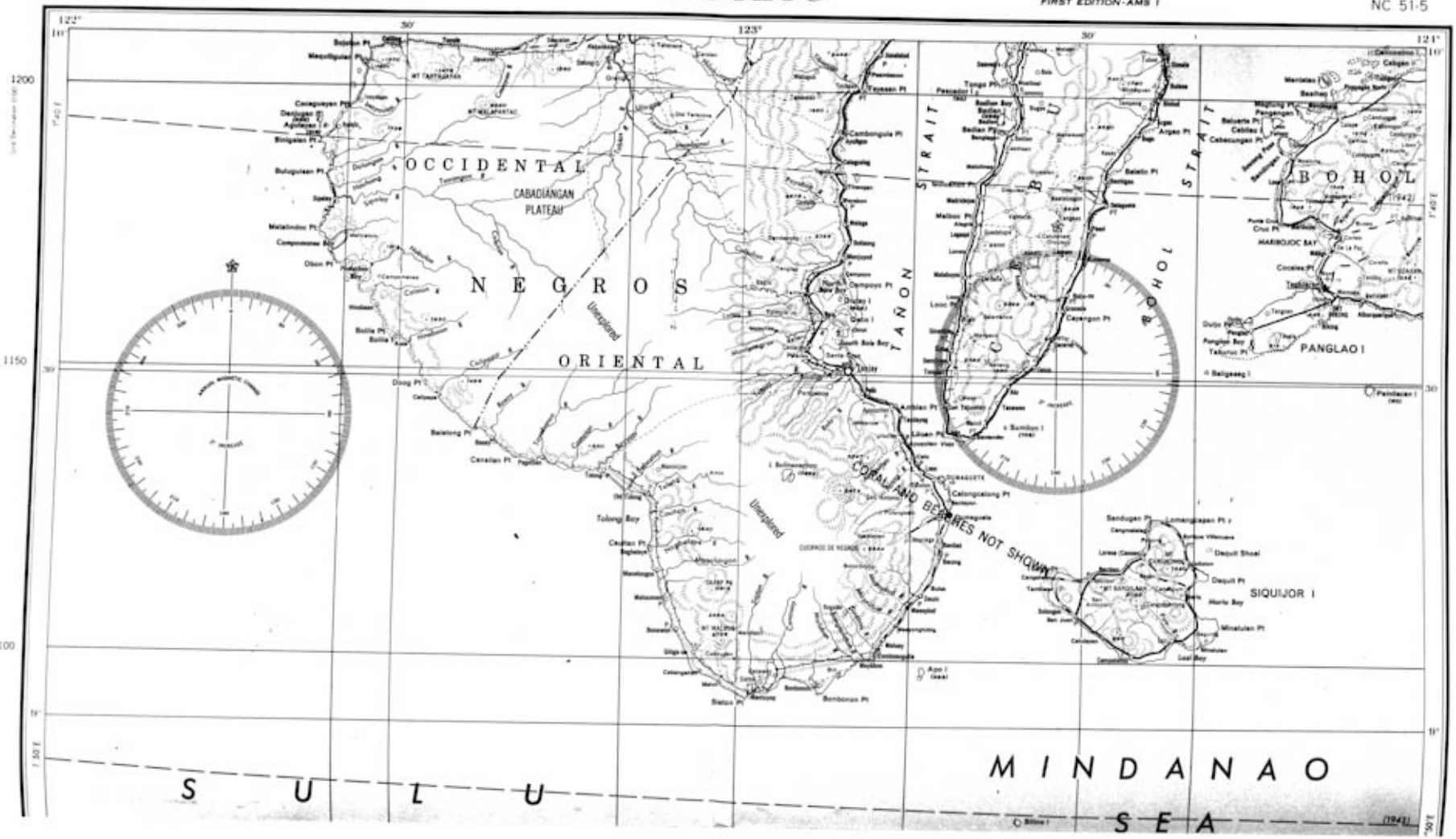
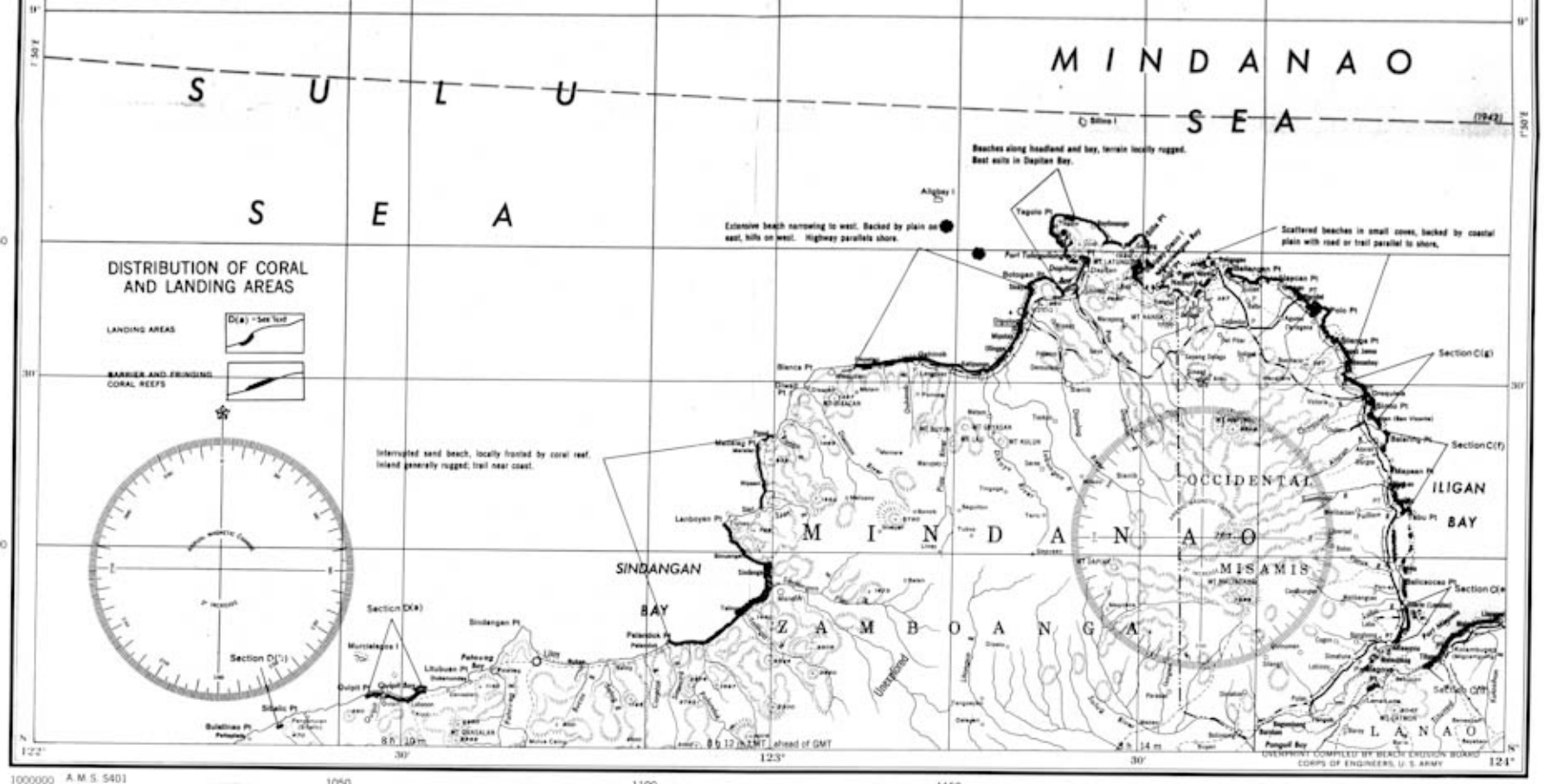
DIPOLOG

FIRST EDITION-AMS 1

PLAN NO.24
JANIS 155
NC 51-5




MINDANAO SEA
SULU SEA
DISTRIBUTION OF CORAL AND LANDING AREAS
LANDING AREAS
BARRIER AND FRINGING CORAL REEFS
Beaches along headland and bay, terrain locally rugged. Best exits in Dapitan Bay.
Extensive beach narrowing to west. Backed by plain on east, hills on west. Highway parallels shore.
Scattered beaches in small coves, backed by coastal plain with road or trail parallel to shore.
Interrupted sand beach, locally fronted by coral reef. Inland generally rugged; trail near coast.
Section C(g)
Section C(f)
Section C(e)
Section D(a)
Section D(c)
OCCIDENTAL MISAMIS
ILIGAN BAY
SINDANGAN BAY
ZAMBOANGA
DIPOLOG
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8 h 12 m N.M.T. ahead of GMT
4 h 14 m
Unsurveyed
1000000
1050
1100
1150
1200
122°
123°
124°
30'
9°
8°
A.M.S. 5401
LEGEND
REDON
REDONDIN
Scale 1:500,000
Polyconic Projection
Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4429, 4430, 4431, 4432, 4604, 4605, 4606; USC&GS Topographic Maps 15, 16 and 50; Bureau of Public Works Road Maps 8, 9, 10 and 12; Commission of the Census Atlas, Vols. I & II; Communications Map C.M. 15 and USC&GS Areas Map A-3 and Aeronautical Charts Nos. 3 and 4.
CONVERSION TABLE
SHEET INDEX
DIPOLOG
N800-E12200/200
DECLASSIFIED
By Authority of

PLAN 25 JANIS No. 155 [redacted]

MORO GULF SHEET, MINDANAO—
Topography, landing areas, and coral

PHILIPPINE ISLANDS 1:500.000

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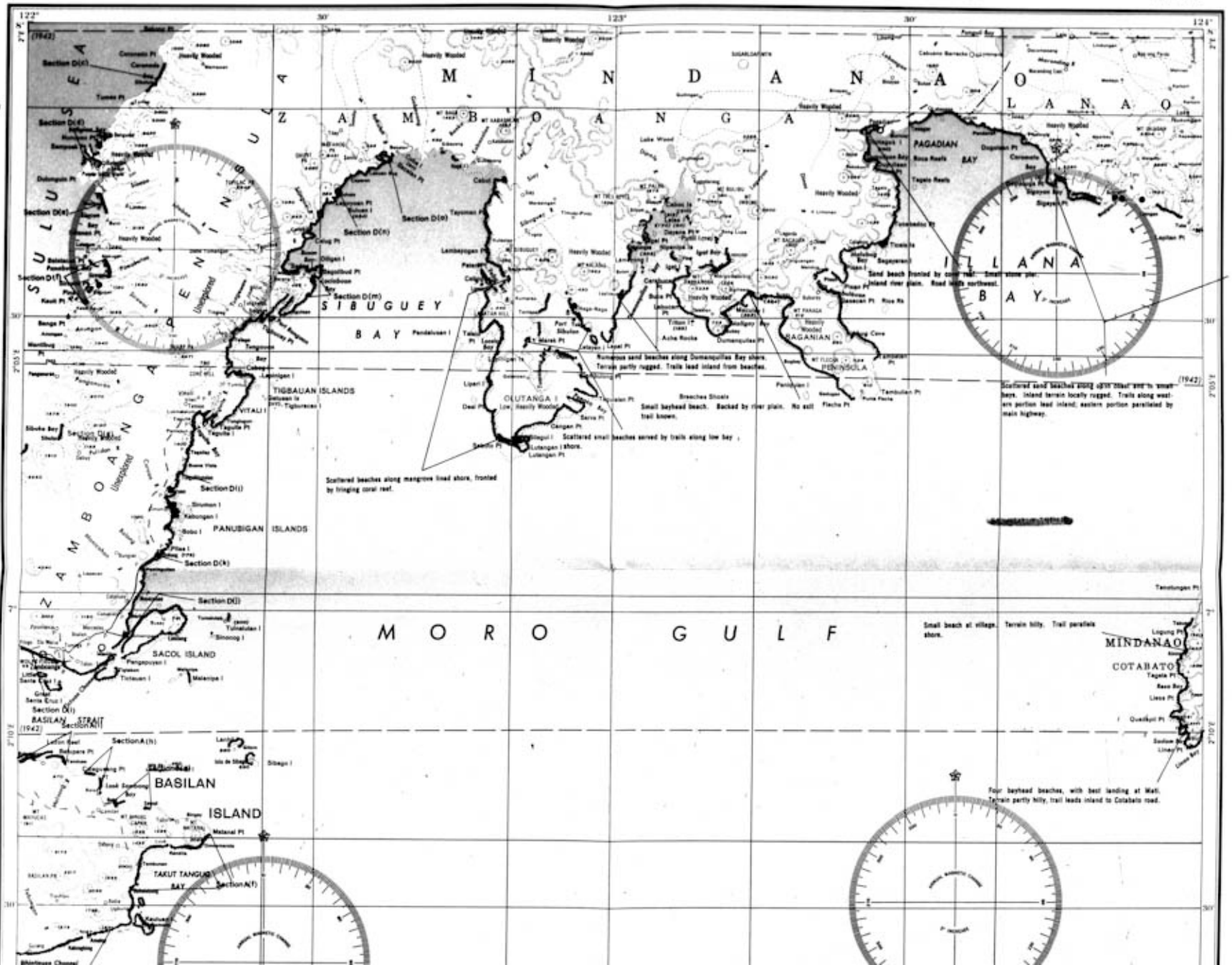
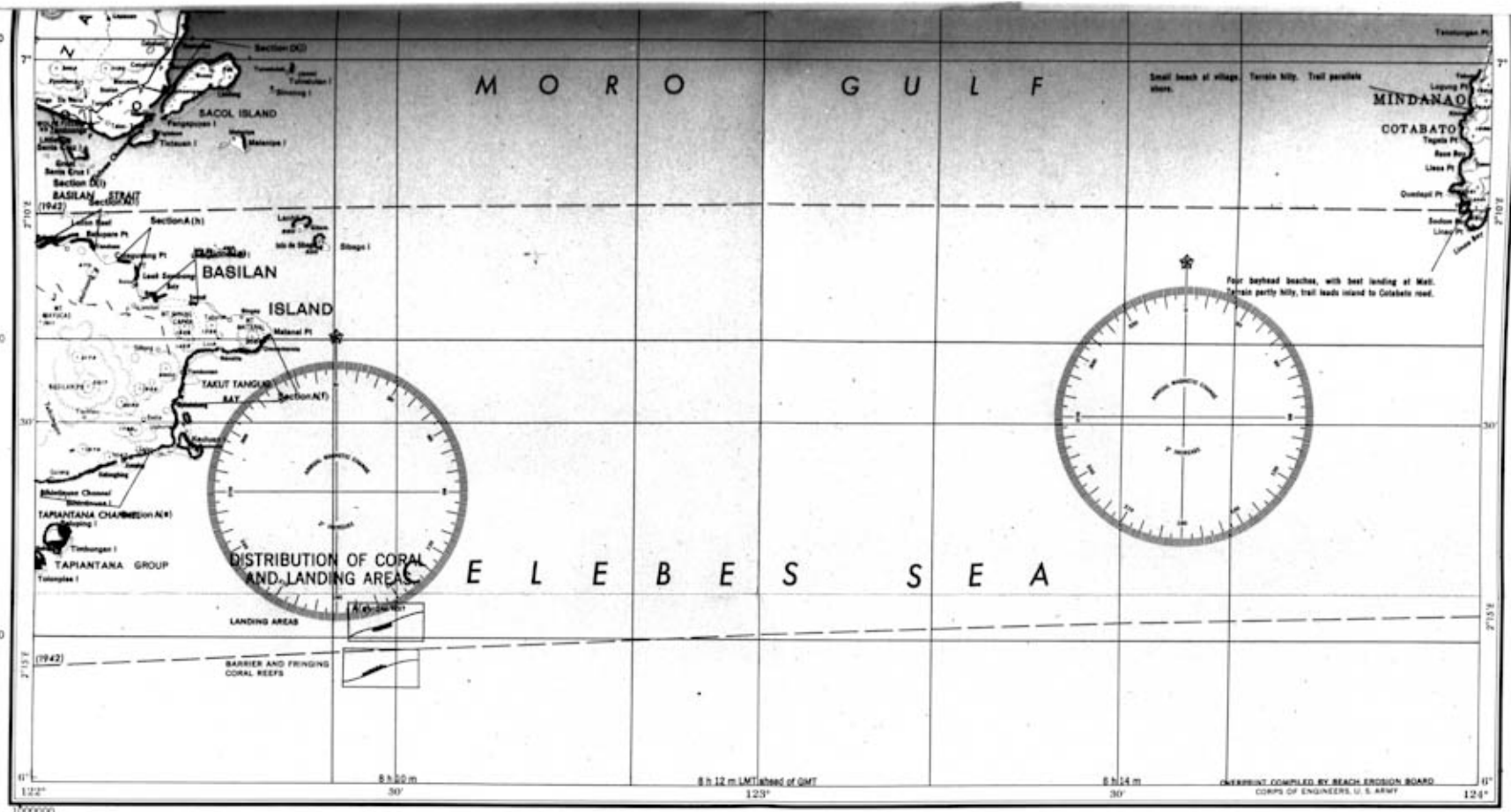
MORO GULF

FIRST EDITION-AMS 1

JANIS 155

NB 51-2





A.M.S. 5401

LEGEND

Scale 1:500,000

Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4511, 4512, 4606, 4606, 4607 ... USC&GS Topographic Map No. 50 - Bureau of Public Works Road Maps 10 and 12 - Commission of the Census Atlas Vols. I & II - Communications Map C. M. 15 - Marine Corps School Map P. 30 and USC&GS Airway Map No. A-3 and Aeronautical Chart No. 4

CONVERSION TABLE

SHEET INDEX

MORO GULF

PLAN 26 JANIS No. 155 [redacted]

PANGUTARAN GROUP SHEET, MINDANAO—Topography, landing areas, and coral

PHILIPPINE ISLANDS 1:500,000

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PANGUTARAN GROUP

FIRST EDITION-AMS 1

PLAN NO. 26
JANIS 155
NB 51-1

SULU SEA

MINDANAO

ZAMBOANGA PENINSULA

ZAMBOANGA PROVINCE

BASILAN

BASILAN ISLAND

STRAIT

PILAS GROUP

PILAS ISLAND

TAPIANTANA GROUP

PANGUTARAN

PANGUTARAN ISLAND

Kulassein I

Tubigan I

Taomabal I

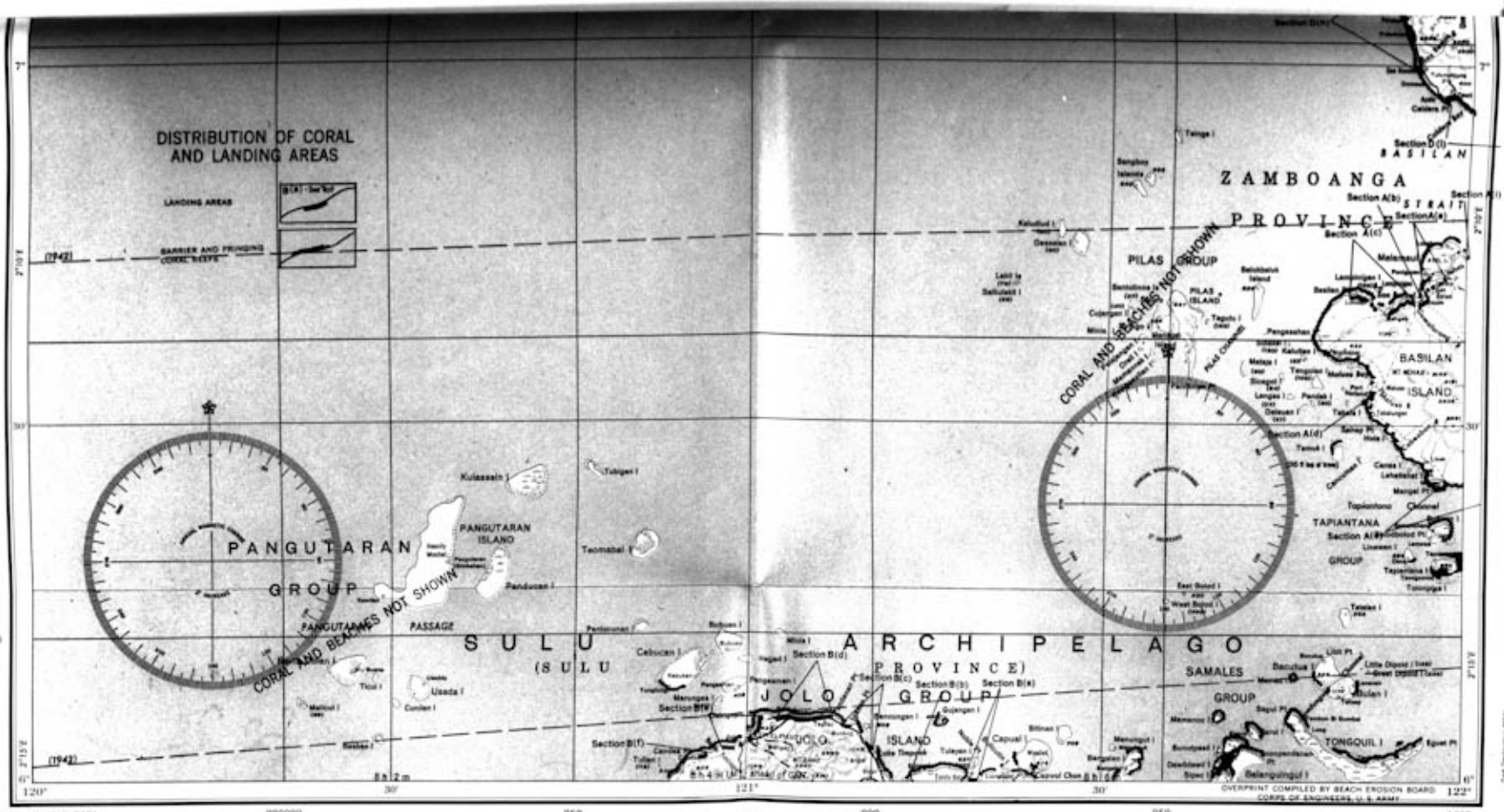
DISTRIBUTION OF CORAL AND LANDING AREAS

LANDING AREAS

BARRIER AND FRINGING CORAL REEFS

(1942)

CORAL AND BEACHES NOT SHOWN



A. M. S. S401

LEGEND

Scale 1:500,000

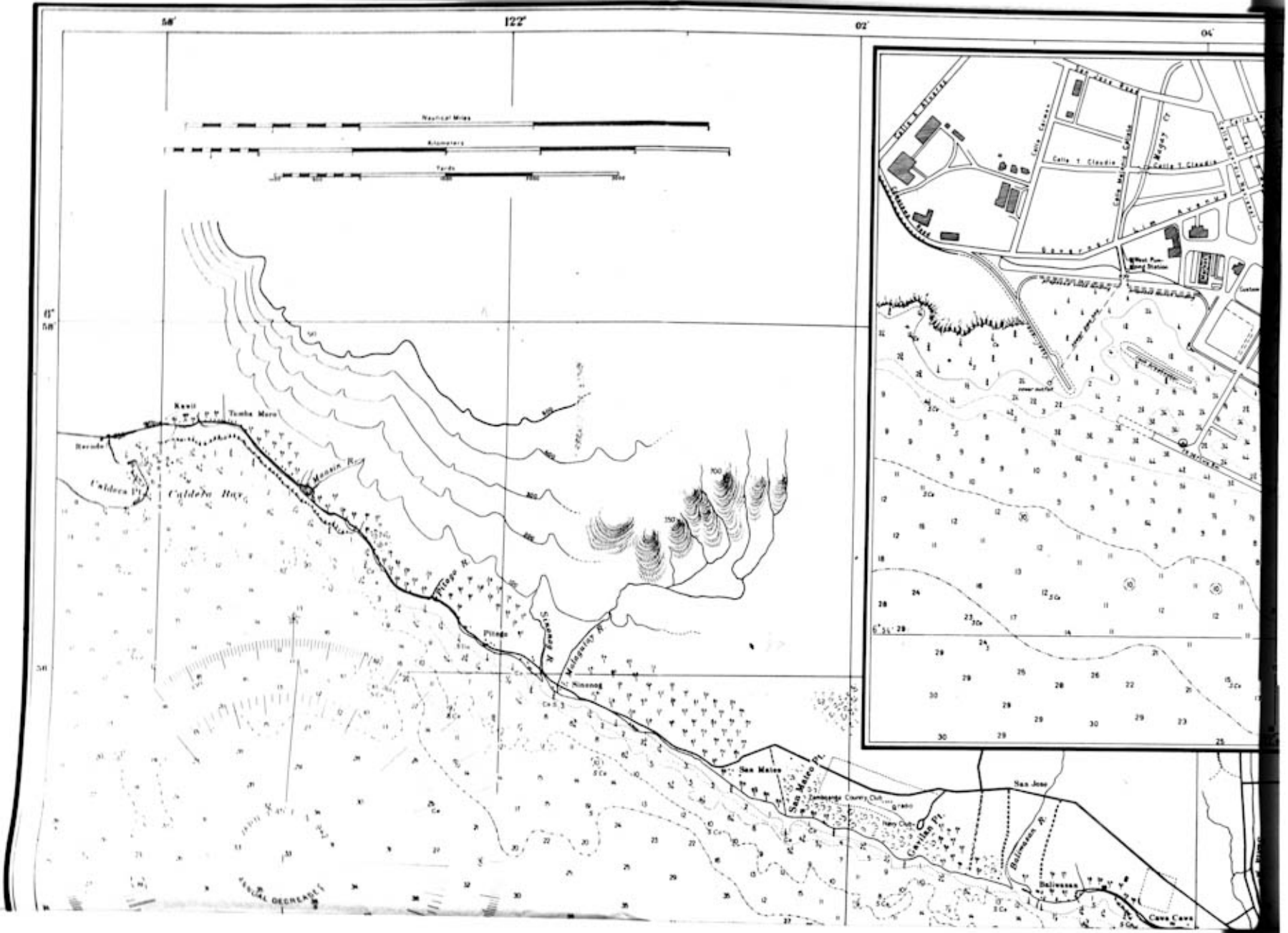
Polyconic Projection

SHEET INDEX

PANGUTARAN GROUP

PLAN 27 JANIS No. 155 [redacted]

ZAMBOANGA AND VICINITY, MINDANAO—Hydrographic chart.
HO 4645


58'
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02'
04'
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Kilometers
Yards
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Tambo Moro
Bacoor
Caldera Pt.
Caldera Bay
Manila Bay
Pitogo R.
Pitogo
Sinenag R.
Malagasang R.
Binanog
San Mateo
San Mateo Pt.
Zamboanga Country Club
Navy Club
Canillas Pt.
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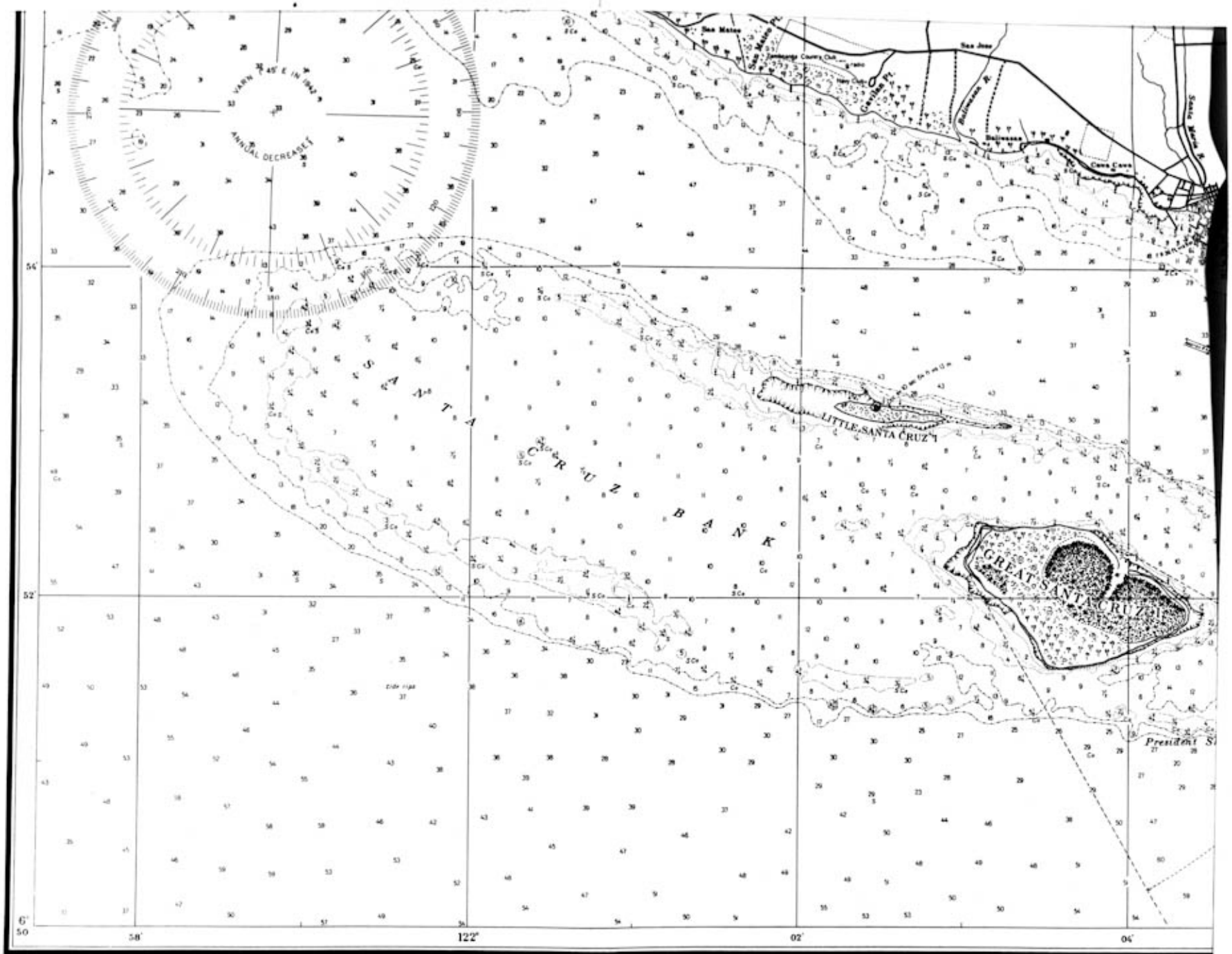

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Special Printing at Wash., D. C. (reprint 47-1961)

BY

PHILIPPINE ISLANDS
SOUTH COAST OF MINDANAO

VICINITY OF ZAMBOANGA

MASINLOC ANCHORAGE TO CALDERA BAY

Not to be used for Navigational purposes

Scale 1:30,000

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

TIDES — Zamboanga
High water interval — 9h 25m
Higher high water height — 3.1 ft
Lowest tide — -1.5

ABBREVIATIONS

AUTHORITIES
Surveys in 1926 and 1940

HEIGHTS in feet above high water

PHILIPPINE ISLANDS
SOUTH COAST OF MINDANAO

ZAMBOANGA WATERFRONT

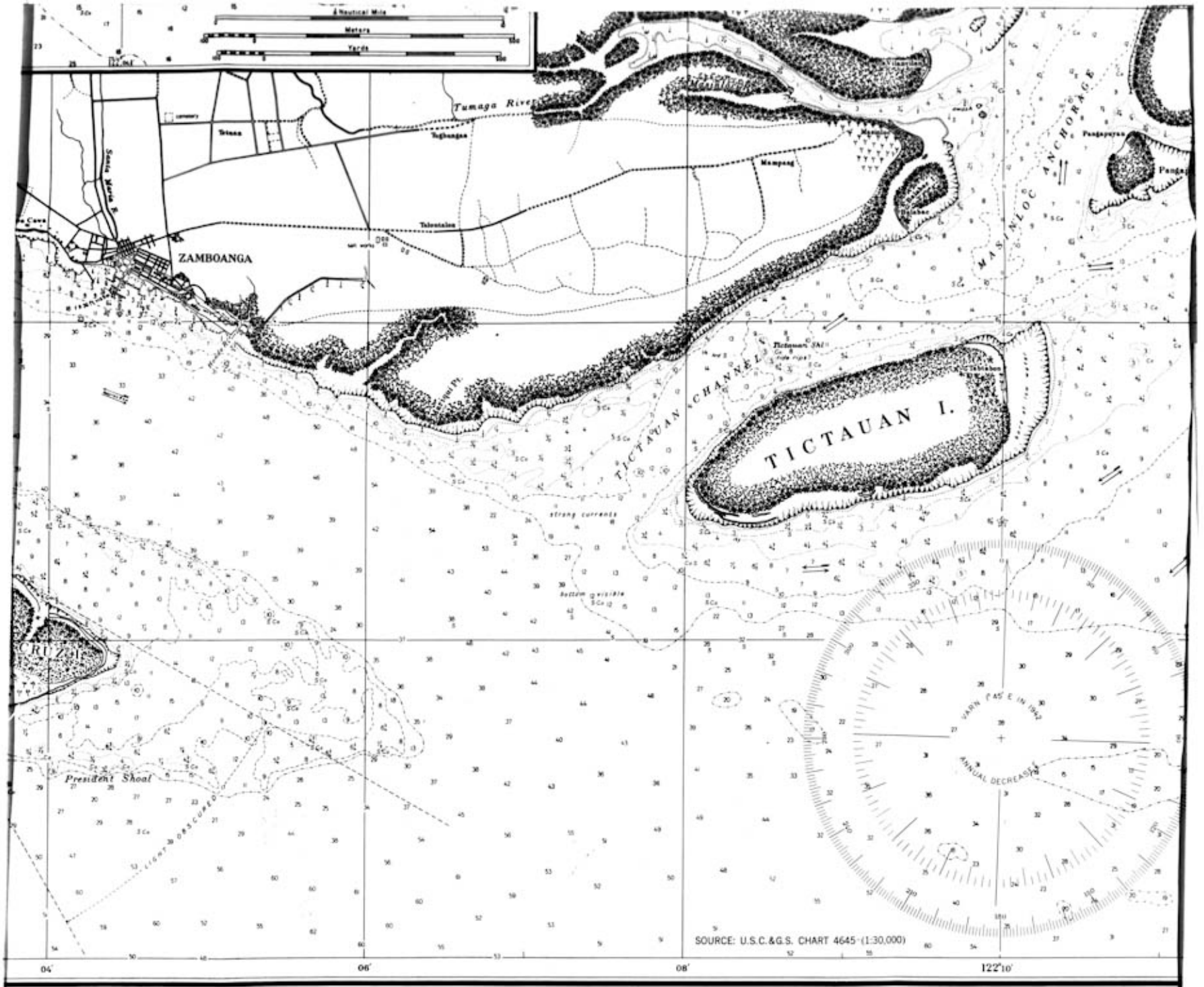
Scale 1:5,000

Surveys to 1940

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

1 Nautical Mile
Meters
Yards

Tumaga River
Tetuan
Tugbungan
Mampang
Masinloc
Pangapuyan
Pangapuyan
Talusan
Talusan
Malalaan
Tahuksangay
Santa Maria R.
Cemetery
Customs House
Provincial Bldg.
Berink



Published at Manila, P.I., Aug. 1941
BY THE U.S. COAST AND GEODETIC SURVEY
L. O. Colbert, Director

LIGHTS, BEACONS, BUOYS, AND DANGERS CORRECTED FOR INFORMATION RECEIVED TO DATE OF ISSUE

(Zamboanga, Masinloc Anch. to Caldera

PHILIPPINE ISLANDS

SOUTH COAST OF MINDANAO

VICINITY OF ZAMBOANGA

MASINLOC ANCHORAGE TO CALDERA BAY

Not to be used for Navigational purposes

Scale 1:30,000

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

TIDES

	Zamboanga
High water interval	6h 29m
Higher high water height	3.3 ft.
Lowest tide	-1.5

ABBREVIATIONS

Lights F. fixed, Fl. flashing, Occ. occulting, G. green, R. red, W. white, Gp. group, Sec. sector, I. illuminated, m. miles, ft. feet, min. minutes, sec. seconds, ev. every, vis. visible.
AERO. aeronautical light. Approx. Pos. approximate position.
Color white unless otherwise indicated.
Buoys. C. cone, N. nun, S. spar, Bn. beacon.
M. mud, S. sand, P. pebbles, G. gravel, Co. coral, Co. Hd. coral head, Cl. clay, Sh. shells, St. stones, Sp. specks, Cr. coze, Gl. globigerina, dk. dark, lt. light, bl. black, wh. white, rd. red, yl. yellow, gn. grey, bu. blue, gn. green, br. brown, str. streaky, spk. speckled, hrd. hard, sft. soft, fne. fine, crs. coarse, lrg. large, sml. small, brk. broken, stk. sticky, srf. stiff, gty. gritty, dec. decayed, rky. rocky, cal. calcareous, sol. volcanic, gl. glacial, Fg. Foggy.

P.D. position doubtful. E.D. existence doubtful.

Flood ⟶ Ebb ⟶

AUTHORITIES

Surveys to 1926 and 1940

HEIGHTS in feet above high water.

Barlak

Tahuksanggay

Mulsuan

Villasisilan

Masinloc

Tumaga River

Tugbungan

Mampang

Tabontabon

Pangapuyan

Pangapuyan I.

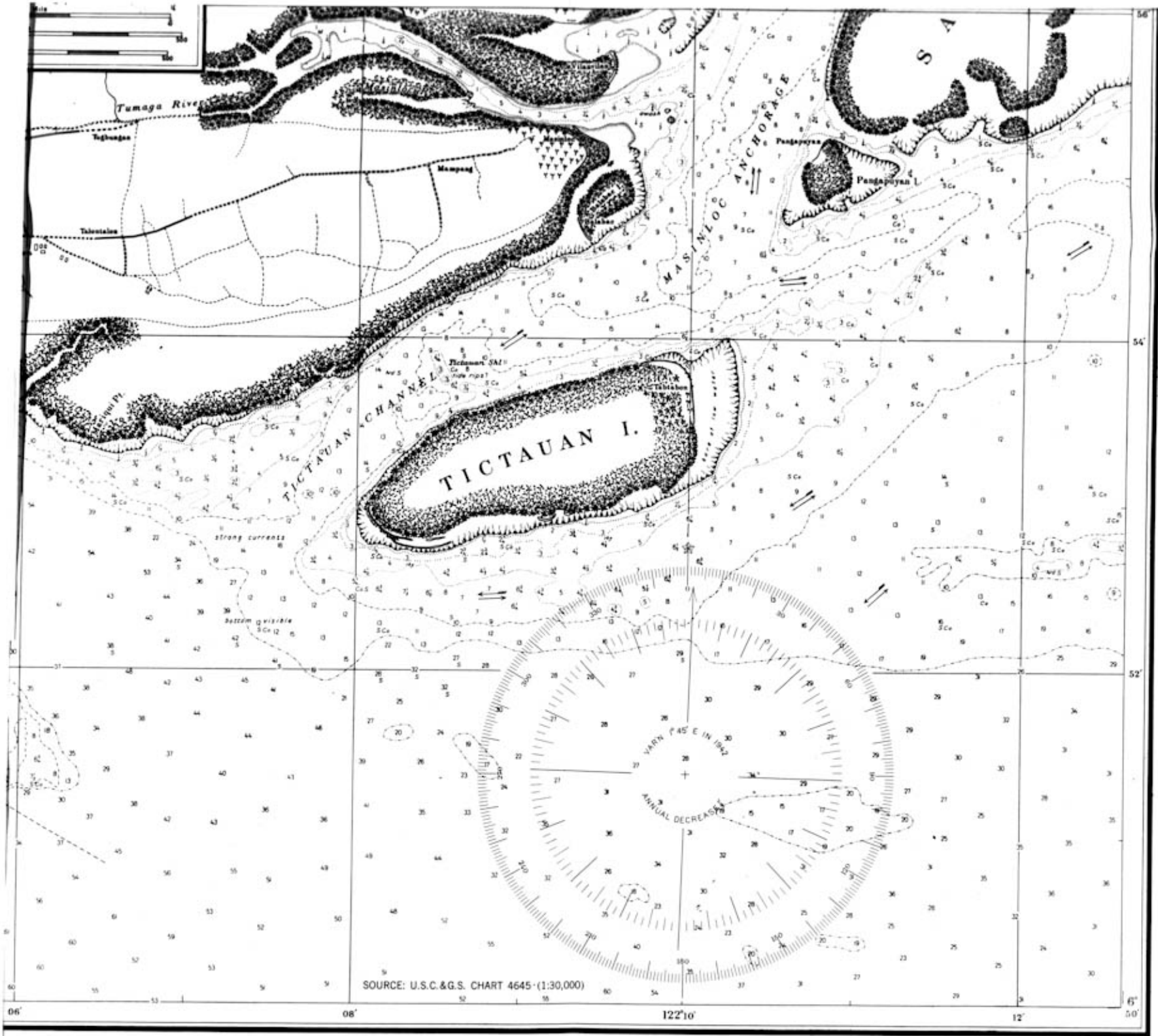
SACOL I.

MASINLOC ANCHORAGE

6° 58'

56'

ISLANDS
MINDANAO
WATERFRONT
1940
FATHOMS
LOW WATER



LIGHTS, BEACONS, BUOYS, AND DANGERS CORRECTED FOR INFORMATION RECEIVED TO DATE OF ISSUE

(Zamboanga, Masinloc Anch. to Caldera Bay) U.S.C.&G.S. 4645

PRICE 50 CENTS

PLAN 28 JANIS No. 155 [redacted]

DAVAO SHEET, MINDANAO—Topography, landing areas, and coral

PHILIPPINE ISLANDS 1:500,000

[redacted]

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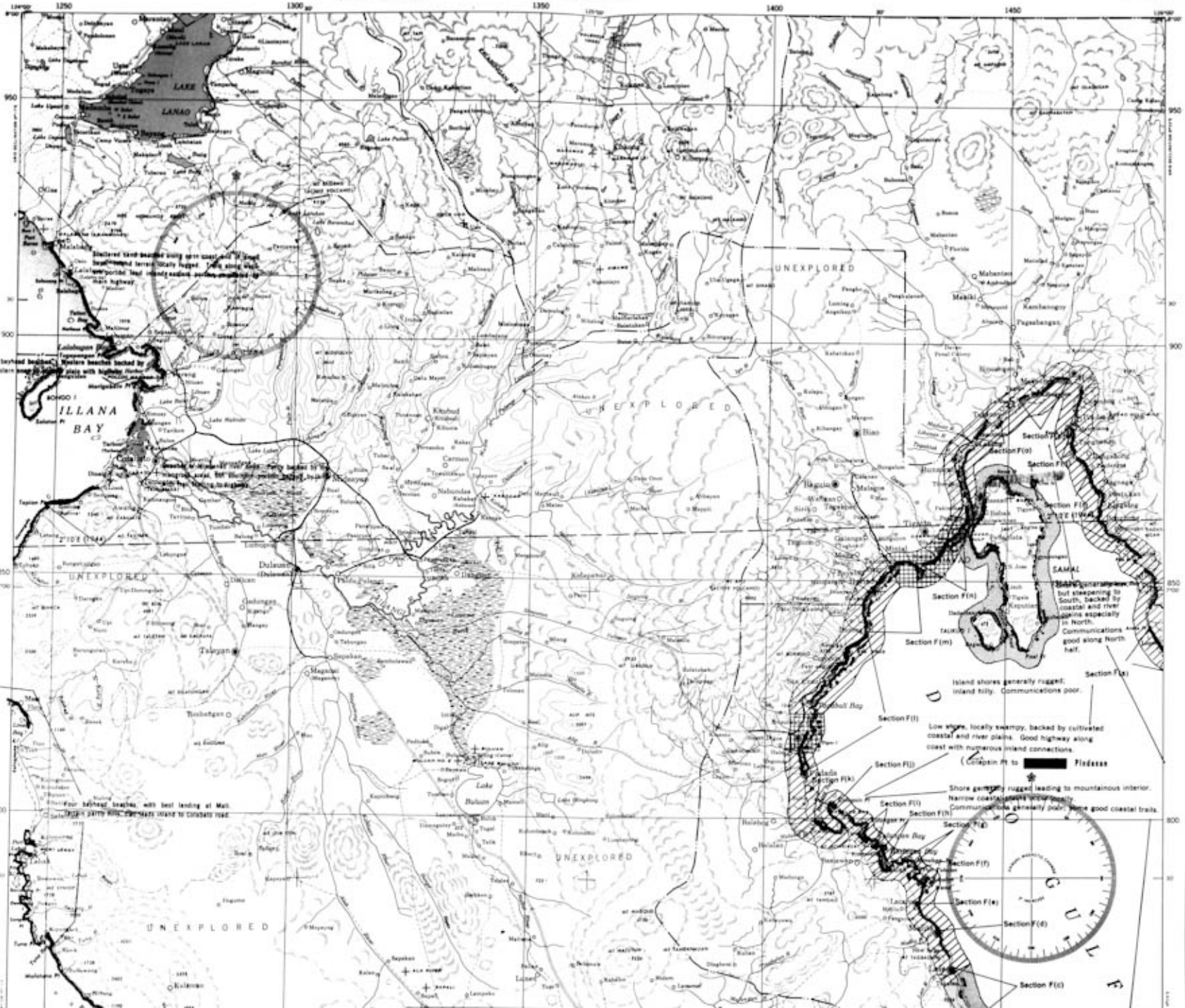
C[redacted]

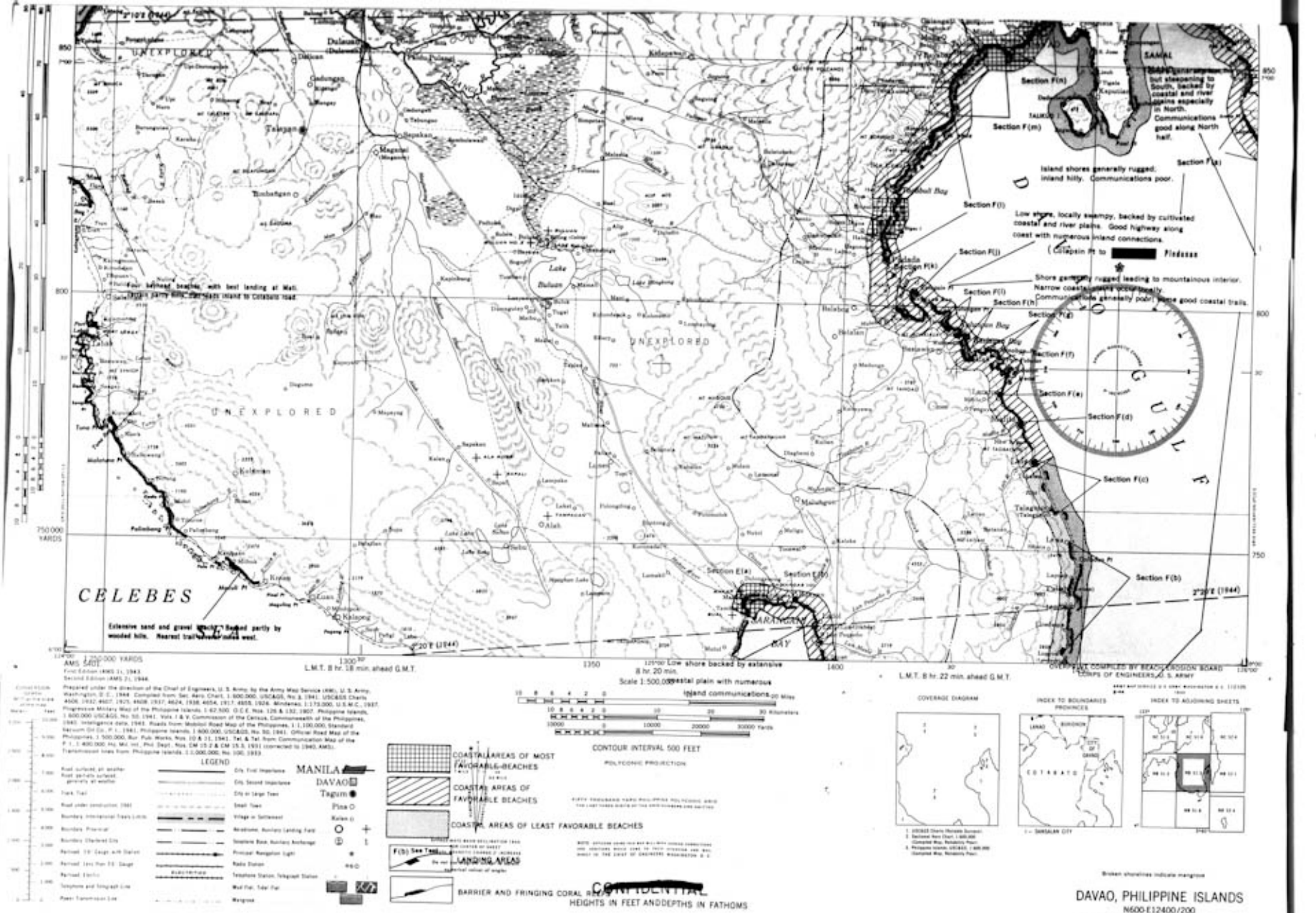
DAVAO

SECOND EDITION - AMS 2

PLAN NO 28
JANIS 155

NB 51-3




UNEXPLORED
CELEBES
Davao
Tagum
Digos
Malita
Sarangani Bay
Lake Buluan
Four fathead beaches with best landing at Mati.
Extensive sand and gravel beach backed partly by wooded hills. Nearest trail-head 2 miles west.
Low shore backed by extensive coastal plain with numerous inland communications.
Island shores generally rugged, inland hilly. Communications poor.
Low shore, locally swampy, backed by cultivated coastal and river plains. Good highway along coast with numerous inland connections.
Shore generally rugged leading to mountainous interior. Narrow coastal plains occur locally. Communications generally poor, some good coastal trails.
SAMAL
Shore generally rugged but steepening to South, backed by coastal and river plains especially in North. Communications good along North half.
GULF
Section F(a)
Section F(b)
Section F(c)
Section F(d)
Section F(e)
Section F(f)
Section F(g)
Section F(h)
Section F(i)
Section F(j)
Section F(k)
Section F(l)
Section F(m)
Section F(n)
Section E(a)
Section E(b)
1:250,000 YARDS
AMS 5407
First Edition-AMS 21, 1943.
Second Edition-AMS 21, 1944.
L.M.T. 8 hr. 18 min. ahead G.M.T.
L.M.T. 8 hr. 20 min.
L.M.T. 8 hr. 22 min. ahead G.M.T.
Scale 1:500,000
CONTOUR INTERVAL 500 FEET
POLYCONIC PROJECTION
LEGEND
MANILA
DAVAO
Tagum
Pina
Kalao
COASTAL AREAS OF MOST FAVORABLE BEACHES
COASTAL AREAS OF FAVORABLE BEACHES
COASTAL AREAS OF LEAST FAVORABLE BEACHES
LANDING AREAS
BARRIER AND FRINGING CORAL REEFS
HEIGHTS IN FEET AND DEPTHS IN FATHOMS
COVERAGE DIAGRAM
INDEX TO BOUNDARIES PROVINCES
INDEX TO ADJOINING SHEETS
COTABATO
DAVAO, PHILIPPINE ISLANDS
N600-E12400/200
DECLASSIFIED
By Authority of

PLAN 29 JANIS No. 155 [redacted]

BATULAKI SHEET, MINDANAO—
Topography, landing areas, and coral

PHILIPPINE ISLANDS 1:500,000

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BATULAKI

SECOND EDITION - AMS 2

PLAN NO. 29
JANIS 155
NB 51-6

1:250 000 YARDS

COAST NOT CLASSIFIED

MINDANAO

SARANGANI BAY

SARANGANI STRAIT

SARANGANI IS

Sarangani Island

Section E(4)

Section F(5)

CELEBES SEA

PACIFIC OCEAN

PHILIPPINE POLYCONIC GRID

U.S. YARD GRID N. E. I. EQUATORIAL ZONE

INTERNATIONAL TREATY LIMITS

DISTRIBUTION OF CORAL AND LANDING AREAS

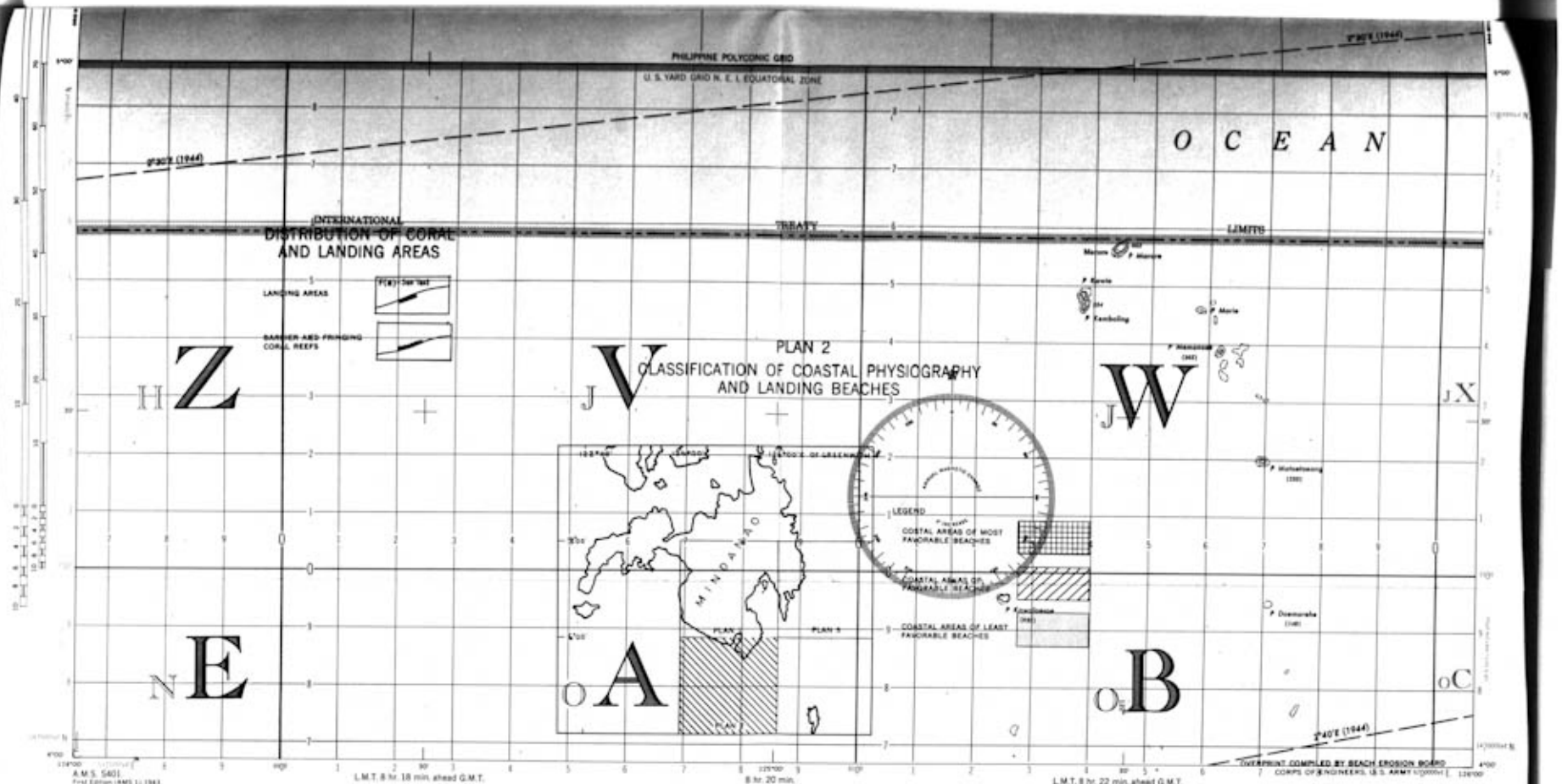
LANDING AREAS

BARRIER AND FRINGING CORAL REEFS

PLAN 2
CLASSIFICATION OF COASTAL PHYSIOGRAPHY AND LANDING BEACHES

LEGEND

COASTAL AREAS OF MOST FAVORABLE BEACHES



A.M.S. 5601
First Edition (AMS 1) 1943.
Second Edition (AMS 2) 1944.
Prepared under the direction of the Chief of Engineers, U. S. Army,
by the Army Map Service (AM), U. S. Army, Washington, D. C., 1944.
Compiled from Sectional Aeronautical Chart, 1:500,000, USC&GS, No. 3, 1941; USC&GS Charts 4607, 1937; 4608, 1937;
Netherlands East Indies Hydrographic Chart No. 183, 1935; Philippine Islands, 1:500,000, USC&GS, No. 50, 1941.
Volumes I & II, Commission of the Census, Commonwealth of the Philippines, 1940; Intelligence Data, 1943.
Roads from Mobilod Road Map of the Philippines, 1:1,000,000, Standard Vacuum Oil Co., Philippine Islands, 1941.
Official Road Map of the Philippines, 1:500,000, Bureau of Public Works, No. 11, 1941.
Telegraph & Telephone from Communication Map of the Philippine Islands, 1:400,000.
Headquarters Military Intelligence, Philippine Department, No. CM-15-3, 1931. (Corrected to 1940, AMS).

LEGEND

City, First Importance — MANILA
City, Second Importance — DAVAO
City or Large Town — Tagum
Small Town — Pina
Village or Settlement — Kalao
Aerodrome, Auxiliary Landing Field
Seaplane Base, Auxiliary Anchorage
Principal Navigation Light — RSD
Radio Station
Telephone Station, Telegraph Station
Mud Flat, Tidal Flat
Mangrove
Road surfaced all weather
Road partially surfaced; generally all weather
Track, Trail
Road under construction, 1941
Boundary, International, Treaty Limits
Boundary, Provincial
Boundary, Chartered City
Railroad, 3'6" gauge, with Station
Railroad, Less than 3'6" gauge
Railroad, Electric
Telephone and Telegraph Line
Power Transmission Line

POLYCONIC PROJECTION

U. S. YARD GRID
N. E. I. EQUATORIAL ZONE

Projection: Lambert Conical Orthomorphic
Spheroid: Bessel
Origin: Equator and 119°E
False Co-ordinates of Origin: 6,561,095.6 yards East, 999,757.8 yards North
Scale Factor: 1

CONFIDENTIAL

HEIGHTS IN FEET AND DEPTHS IN FATHOMS

COVERAGE DIAGRAM

INDEX TO BOUNDARIES

PHILIPPINE IS.
NETHERLANDS INDIES

INDEX TO ADJOINING SHEETS

BATULAKI, PHILIPPINE ISLANDS
N400 E12400/200

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By Authority of
JCS letter, 7-25-75

PLAN 30 JANIS No. 155 [redacted]

CAPE SAN AGUSTIN SHEET, MINDANAO—Topography, landing areas, and coral

PHILIPPINE ISLANDS 1:500,000

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CAPE SAN AGUSTIN

SECOND EDITION - AMS 2

PLAN NO 30
JANIS 155
NB 52-I

COAST NOT CLASSIFIED

Sand beach at town of Cateel near river mouth. Roads and trails radiate inland and along coast.

Scattered beaches along bay shores. Inland generally rugged. Trail along coast connects landing areas.

Rugged coast with numerous small bays. Interior hilly; trail along shore.

Low shores along heads of bays with rocky promontory between. Extensive cultivated coastal plain inland; good communications.

INTERNATIONAL TREATY LIMITS

PHILIPPINE POLYCONIC GRID

BAND IIIa ZONE "C"

2°10'E (1944)

N O R T H

P A C I F I C

O C E A N

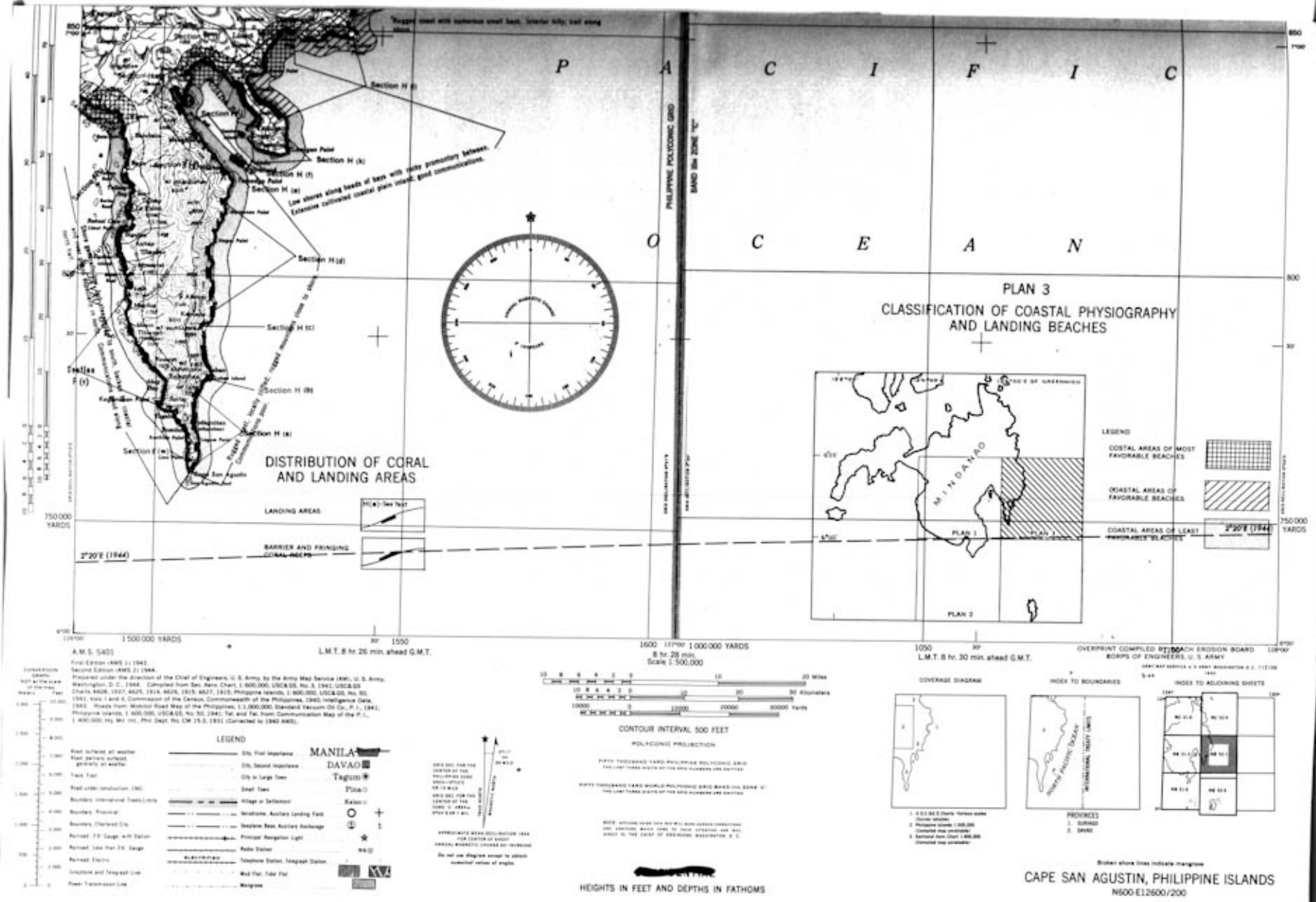
PLAN 3

CLASSIFICATION OF COASTAL PHYSIOGRAPHY AND LANDING BEACHES

LEGEND

COASTAL AREAS OF MOST FAVORABLE BEACHES

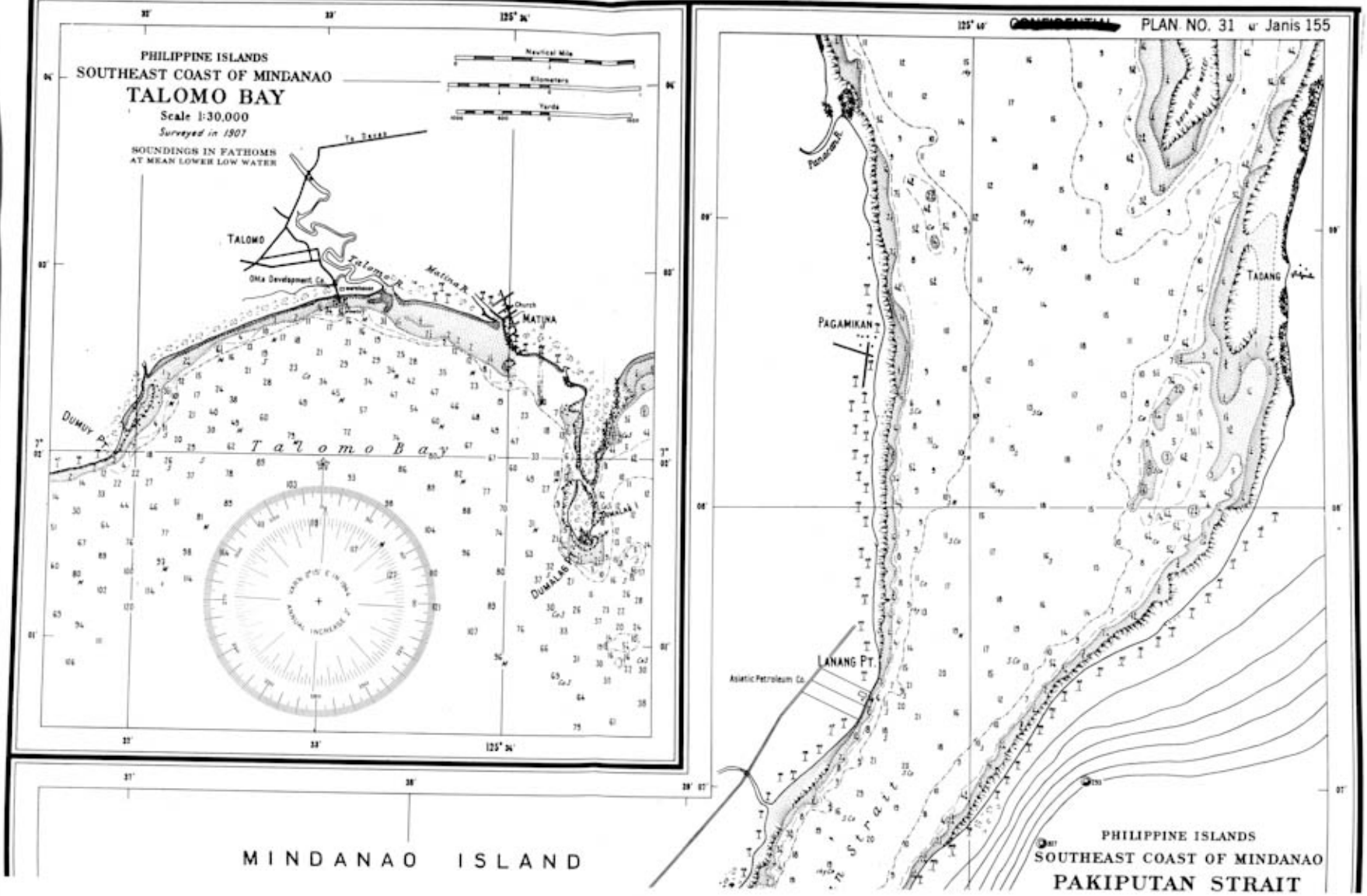
DISTRIBUTION OF CORAL

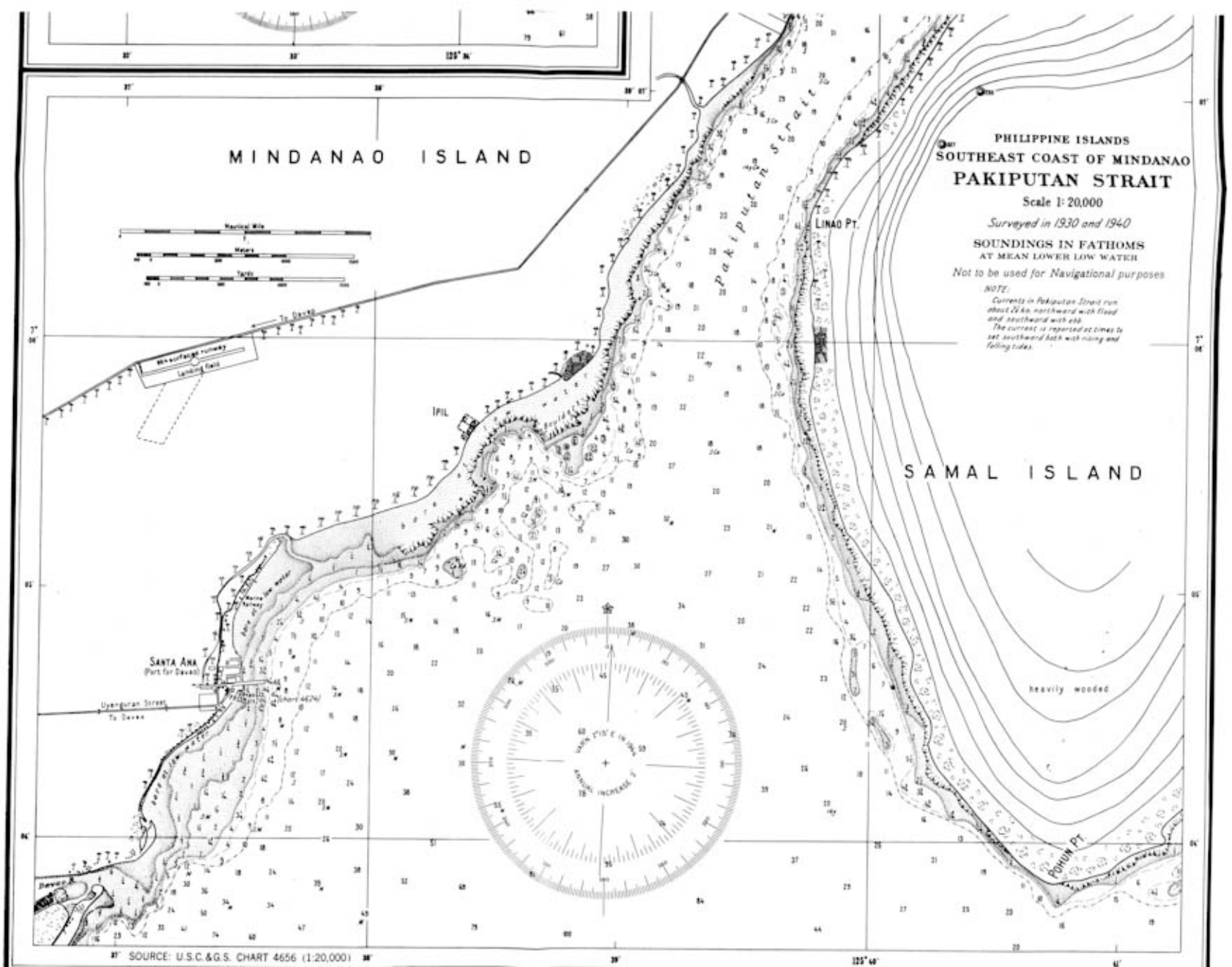


DECLASSIFIED
By Authority of _____

PLAN 31 JANIS No. 155 [redacted]

PAKIPUTAN STRAIT, MINDANAO—
Hydrographic chart. HO 4656


PHILIPPINE ISLANDS
SOUTHEAST COAST OF MINDANAO
TALOMO BAY
Scale 1:30,000
Surveyed in 1907
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER
Nautical Mile
Kilometers
Yards
To Davao
TALOMO
Talomo R.
Matina R.
Church
MATINA
DUMUY PT.
Talomo Bay
DUMALAS PT.
MINDANAO ISLAND
CONFIDENTIAL
PLAN NO. 31 of Janis 155
Pamaran R.
TAGANG
PAGAMIKAN
LANANG PT.
Asiatic Petroleum Co.
PHILIPPINE ISLANDS
SOUTHEAST COAST OF MINDANAO
PAKIPUTAN STRAIT



has been

PLAN 32 JANIS No. 155 [redacted]

LIANGA SHEET, MINDANAO—Topography, landing areas, and coral

PHILIPPINE ISLANDS 1:500.000

LIANGA

FIRST EDITION-AMS 1

NC 52-4

SIARGAO ISLAND
(SURIGAO PROV)

DISTRIBUTION OF CORAL AND LANDING AREAS

LANDING AREAS

BARRIER AND FRINGING CORAL REEFS

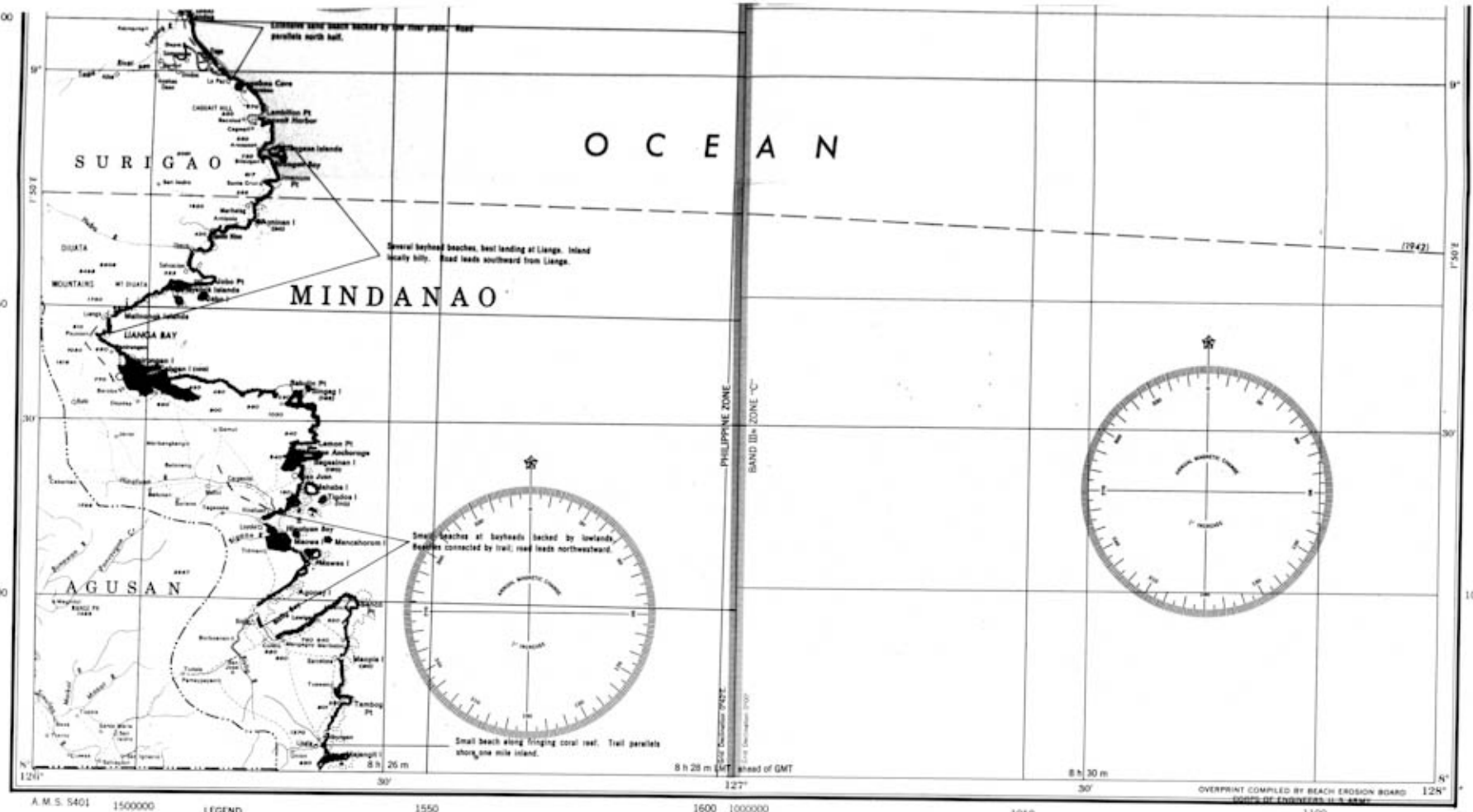
(1942)

N O R T H

P A C I F I C

O C E A N

SURIGAO



A.M.S. S401

LEGEND

Scale 1:500,000

Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4803, 4627, 4628, 4629 - USC&GS Topographic Map No. 50 - Bureau of Public Works Road Map No. 10 - Commonwealth of the Census Atlas Vols. I & II - Commonwealth Map C.M. 15 and USC&GS Aeronautical Chart No. 5.

SHEET INDEX

LIANGA

N800-E12600/200

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By SR Date AUG 1 1975

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